

# *the Humanist*

JULY/AUGUST 1986 \$3.00

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## **1986 Humanist of the Year**



**Faye Wattleton**

**Also  
Speeches by Francis Crick  
and Daniel Ellsberg**



# *the Humanist*

Self-discovery can be exhilarating. If you are troubled by separating your head and heart and feel some guilt in pretending to believe much which you know isn't true, there is a way out. Release from outworn traditional beliefs can be furthered by honestly reviewing philosophical and religious ideas, values, and attitudes toward nature and fellow humans. It is important to know oneself and to take a stand. Numerous special interest groups are accelerating the undermining of civilizing endeavors. For instance, most religious authoritarians are now allied to political reaction. Understandably, the religious right is focusing upon secular humanism as an enemy.

Ask any two humanists what is meant by "secular humanism" and you will receive different answers, whereas there is closer agreement to the meaning of humanism. Whether it can be considered a religion or a philosophy or a general ethical approach to living depends upon an individual's background, perceptions, preference, and needs.

You can easily determine whether or not you can be classified as a humanist by answering these questions: Do you believe that humans will continue to learn more about the way Earth was formed, how life developed, and how humans have created our ethical and moral systems? Do you believe that we are a part of nature and that there is no deity especially concerned for our welfare? Do you believe that the religions of the world and the sacred scriptures were the creations of mortals and that religions have served different purposes at different times and places? Do you recognize the importance of outreach to others and believe that personal freedom has to be tempered by how it affects other individuals? Do you feel comfortable with pluralistic live-and-let-live democratic ideals, compassionate humanistic values, and the scientific spirit? Do you experience pleasure from realizing that you are an earth child—a part of nature on equivalent footing with other species and forms of life? Do you recognize that the meaning of life is not something to discover but to create?

If you answer "yes" to these questions, you view humans in naturalistic terms. You strive to bring about better interactions among people and the processes of nature. Whether or not you acknowledge yourself to be a humanist is an important personal decision. The reward of bringing one's knowledge, feelings, aspirations, and endeavors into harmony is increased personal integration which gives lifelong satisfaction.

*Lloyd L. Morain*

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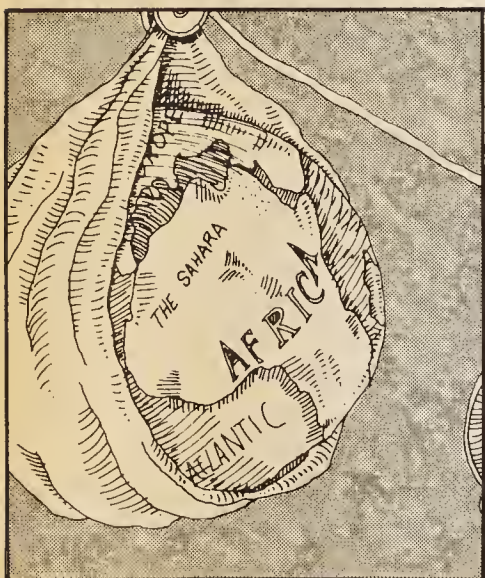
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# READERS FORUM

## A Protest Statement by the AHA Feminist Caucus

At the 1986 Annual Meeting of the AHA Feminist Caucus, held in April in Sacramento during the AHA conference, members of the caucus voted unanimously to protest the May/June 1986 issue of *The Humanist* featuring a "discussion" of comparable worth. We did this with misgivings, remembering the excellent issue of *The Humanist* devoted to coverage of the U.N. Conference on Women, held in Nairobi, and other issues of the magazine containing articles on feminist concerns.

The caucus protests in part because the May/June issue negates the recent excellent outreach of the magazine, of the AHA, and of the Feminist Caucus. Men and women concerned with equality for women are more apt to be repelled than impressed by a discussion of a women's issue that includes only one woman and that woman is Phyllis Schlafly, whose comprehension of comparable worth is no better than her understanding of the *Humanist Manifestos I and II*.

There are women and men who oppose the concept of comparable worth, who know the subject, and who can speak out in opposition (and have) without denying women's right to justice in the workplace at the same time, something neither of the opposition spokespersons in *The Humanist* seemed able to do. A statement by Dianne Feinstein who, as mayor of San Francisco, has come out against comparable worth as a practical solution to pay inequality, at least within her city, would have been more informative and humanistic than either of the opposition positions included in *The Humanist* "discussion." Mayor Feinstein's facts are correct and up to date, and her reasoning is sound.

The statements favoring comparable worth in *The Humanist* discussion were adequate and accurate but would hardly induce readers turned off by Phyllis Schlafly to pick up the magazine. For that, a woman's voice was desperately needed in the discussion. Several that are strong, informed, and concerned about the issue come to mind: Gloria Steinem, founder and editor of *Ms.* magazine and a recipient of a Humanist Pioneer Award; Aileen Hernandez, founder and former national president of NOW, the founder of Black Women Organized for Action, and president of Hernandez Associates; Janet Gray Hayes, former mayor of San Jose, who fought for and achieved comparable worth for municipal employees; and Cleo Kocol, chairperson of the AHA Feminist Caucus, member of the AHA board of directors, a Humanist Counselor, AHA, and a feminist activist in the state of Washington.

These women listed above were not invited by the editors of *The Humanist* to take part in the discussion on comparable worth despite the fact that any of their names would have done much to attract readers interested in the topic and to counteract the negative impact of Phyllis Schlafly's participation. Quite probably *The Humanist's* editors did not consider the difference a woman authority or two could make on the impact of this issue of the magazine. Very obviously, they did not include women in their search for authors.

Neither did they consult women in putting together the May/June issue of the magazine—not the women on the editorial board nor on the AHA board nor in the Feminist Caucus. And this is the main reason for this AHA Feminist Caucus protest. Women are too valuable a resource to

be left out of the decision making process while listed as token names on mastheads and letterheads. The comparable worth issue of *The Humanist* suffered because women weren't included or consulted. Members of the AHA Feminist Caucus urge that this not happen again. *The Humanist* magazine will be a better magazine when it becomes an equal opportunity magazine.

Gina Allen, founder,  
for: AHA Feminist Caucus

## More on Comparable Worth

No amount of elaborate rhetoric against comparable worth can disguise the fact that those against it are in favor of a system that keeps women underpaid and dependent.

Industry is opposed because it sees a huge resource of cheap labor slipping through its fingers. Reactionary men are opposed because an independent wife could undermine their positions as petty tyrants in control of their families. Reactionary women fall into line because they have not learned to think for themselves. Religious communities oppose any changes that liberate women because it means loss of power to dictate behavior and control their thinking and actions.

To sum up, it is obvious that money comes before people. Albert Einstein correctly said that, when a good idea is put forward, it is always opposed by unenlightened minds.

Clara A. Carlson  
Port Angeles, WA

## Belief in Testing

The article by Peter Glick and Mark  
CONTINUED ON PAGE 49



# REPRODUCTIVE RIGHTS FOR A MORE HUMANE WORLD

Anatomists tell us that it takes forty-three muscles to frown but only seventeen to smile. Tonight, we have something to smile about because we are adding Faye Wattleton's name to the list of names of feminine recipients of the Humanist of the Year Award: Margaret Sanger, Mary Calderone, Betty Friedan, Maggie Kuhn, and Helen Caldicott.

Faye Wattleton was born in St. Louis, Missouri, on July 8, 1943, which makes her the youngest person ever to receive the Humanist of the Year Award. She was reared by fundamentalist parents who believed in community service. This background helped to shape her decision to enter the nursing profession and, later, to become actively involved with family planning.

Faye graduated from high school at the age of sixteen. She worked her way through Ohio State University Nursing School. At that time, birth control and family planning issues were of no concern to her as she concentrated on her goal to become the first member of her family to earn a college degree. After graduating in 1964, she taught maternity nursing for two years in Dayton, Ohio. It was there that Faye first encountered and treated women who had had life-threatening abortions.

In 1966, she enrolled in Columbia University in New York, where she earned a master's degree in maternal, infant, and health care and a certificate in nurse-midwifery. During her internship at a Harlem hospital, she became keenly aware of the great need for birth control and for life-saving abortions. Faye became a Planned Parenthood volunteer.

In 1971, Faye was selected to be executive director of Planned Parenthood in Dayton. She exhibited remarkable leadership, tripling the number of clients and increasing the budget from \$400,000 to \$1 million. She dramatically reaffirmed our motto, "Every Child a Wanted Child," when her well-planned daughter, Felicia, was born. Faye also dramatically refuted the antichoice critics who alleged that Planned Parenthood opposed childbirth and child care. After a short maternity leave, Faye returned, bringing her daughter to work every day, where Felicia attended all office, staff, and board meetings. No child ever had so many loving surrogate mothers!

In 1978, Faye was chosen to be president of the Planned Parenthood Federation of America, marking a departure from the succession of white, middle-aged, male executives. The first time I saw Faye at the national Planned Parenthood convention in 1978 in New York City, I was struck by her elegance, her charisma, and her skill as an accomplished speaker. Faye has improved immeasurably the public image of Planned Parenthood.

Founded in 1916 by Margaret Sanger, Planned Parenthood is the nation's oldest and most respected family planning organization. It serves more than three million clients a year and is also a founding member and the largest contributing member of International Family Planning. As president of the Planned Parenthood Federation of America, Faye is also in charge of a large international program which reaches 120 countries.

The most important function of Planned Parenthood is to educate. The task is gargantuan. Planned Parenthood has a favorite slogan, "Think education is expensive? Price ignorance!" Ignorance regarding human reproduction is worldwide. The overwhelming numbers of teenage pregnancies are stark evidence. But Planned Parenthood's educational program is becoming more successful under Faye Wattleton's leadership.

Increasing overpopulation, according to Dr. Stephen Mumford, is the single, most elemental, universal problem facing humans today. Faye, as leader of Planned Parenthood, is actively confronting that problem. She is dedicated to the proposition that women have the right to reproductive freedom, she exudes optimism, and she is confident that her efforts will prevail. The heart of every humanist, Faye, beats in applause to you for your commitment, your optimism, and your confidence.

—Barbara Tabler, from her remarks introducing Faye Wattleton, 1986 Humanist of the Year, at the Forty-Fifth Annual AHA Conference

## The 1986 Humanist of the Year on the continuing challenges for reproductive freedom

FAYE WATTLETON

I am truly honored to receive the Humanist of the Year Award. It means that I have one more thing in common with a woman who was a sister nurse and the first leader of Planned Parenthood—Margaret Sanger, the founder of the family planning movement in this country and the recipient of the Humanist of the Year Award in 1957.

In her acceptance remarks, Mrs. Sanger said:

I have discovered—indeed, I have always known—that it is not enough just to know one great truth. Truth must be lived—not merely passively accepted. Truth must be lived, even though your truth makes you a minority of one.

Margaret Sanger, we know, never was a minority of one. Her great truth—that every child should be a wanted child—has been accepted and adopted by many millions the world over. It is deeply gratifying to share with her, twenty-nine years later, the distinction of receiving the Humanist of the Year Award.



Another reason I am so honored today is because your movement and mine have a great deal in common. There are a number of similarities in our goals. We share a deep respect for reason and for realism, for human life and for human rights. As a result, there are similarities in those who oppose us. In fact, there's probably a great deal of controversy over which of our organizations Jerry Falwell would like to abolish first.

And speaking of Jerry Falwell, it is a pleasure, I must admit, to share with you opposition to him and others of his ilk—those who are opposed to what we consider fundamental needs and fundamental rights for all individuals on this earth—those who would impose upon us all their bigoted views, their moralistic codes, and their inhumane policies.

The thrust of their attacks is to destroy the delicate balance we have achieved in this country between church and state and to destroy the principles, strengthened over the past two hundred years, of tolerance, justice, and individual freedom. They are the apostles of ignorance. They represent the kind of fanaticism that once caused people to hang witches and to burn books. They are, as Abraham Lincoln described them, "people who believe the realm of truth always lies within *their own vision*."

We are thus confronted by a political force that is waging an all-out war against civil and human rights and is giving sanctimonious support for the historic patterns of sex and race discrimination. This is a vigorous movement determined to destroy much of what we have achieved in regard to just laws and humane national policies. As a result, in 1984, the head of the Episcopal Diocese of New York, Bishop Paul Moore, Jr., said, "I see a nation ceasing to be compassionate, ceasing to use its mind in considering the issues before it."

And nowhere is a lack of compassion more apparent than in the controversy over reproductive rights. In the name of morality and religion, these

extremists have taken it upon themselves to return us to the days when the poor were expected to practice *self-control* while the rich practiced *birth-control*—or they were encouraged not to, in order to propagate a superior race.

In the name of morality, these extremists also have made clear their full agenda: to ban not only abortion but also sexuality education and contraception—the only means to *prevent* abortion. Again, in the name of morality, their first line of offense is against those with the least defense—the weakest and poorest of us all, both here and abroad.

America's children are one of their targets. The United States already leads all other developed countries in rates of teenage pregnancy, abortion, and childbirth. If the extremists have their way, it will get even worse.

**T**he threat of teenage pregnancy hits home the hardest if you have children and particularly if you have a daughter. My daughter is ten, and, like other ten-year-olds, she has got the world on a string. My solace in confronting her sexual maturation is the knowledge that she attends an all-girl school. And that's exactly where I intend to keep her for as long as I can.

We have a teen pregnancy epidemic in this country: 1.2 million teenage girls become pregnant every year, and half a million decide to have their babies. The consequences are staggering. Their health is endangered because they are physically immature. And their future is endangered. Teenage mothers and their children are seven times more likely to be poor than other families. Saddest of all, this tragedy is compounded with each new generation. The younger the mother, the more likely that she had a teenage parent.

This is a problem none of us can ignore, even for purely selfish reasons. It's literally costing us a fortune! In 1985 alone, health and welfare programs for teenagers and their children cost the government—the taxpayer—more than \$16.65 billion.

The media have begun to pay attention to this problem. But the attention is focused almost entirely upon the black community. There is no denying that the consequences of teen pregnancy and childbearing disproportionately affect blacks, but it's because blacks are more likely to be disenfranchised.

The reality is that the pregnancy rate among black teenagers is leveling off, while the rate for white teens continues to increase. Clearly, the problem is symptomatic of a larger failing—one that needs to be addressed by the larger society.

And what is that larger society doing? Where is the national commitment to reduce teen pregnancy? What will guide our children away from the destructive landmine of teenage pregnancy which is guaranteed to leave them disabled for the rest of their lives?

Our children need a good basic education, a foundation upon which they can grow. The Reagan administration, though, is opposed to the programs which in the past two decades have given so many children the hope for real opportunities. The Reagan administration does not care much whether or not our children *learn* in school, so long as they *pray* in school.

Our children need food and clothes and medical care and a decent place to live. President Reagan, however, says people sleep on sidewalks by choice. And Attorney General Meese says people go to soup kitchens because soup is free and it's easier than paying for it.

As a result of this mean-spirited, counterproductive mentality, we saw cuts this past year in virtually every program designed to protect the health and welfare of America's children. For example, while the appropriations for



the Defense Department in 1985 reached \$295 billion, the budget for all federal family planning programs—both domestic and international—was \$622 million, a mere two-tenths of one percent of the defense budget. And for the two hundred dollars they spend on a toilet seat, a young woman could buy a year-and-a-half-long supply of birth control services.

Another aspect of the problem is the role played by society's inability to deal with sex and sexuality. Young people see and hear messages that say "do it" everywhere they turn. Yet, at the same time, they're warned not to do it. It's no wonder they're confused. Too many of us are focused upon stopping teenage sexual activity rather than stopping teenage pregnancy.

Parents have to be helped to answer their children's questions comfortably and to pass on their family's values. And, because many parents just can't do that, sexuality education must be a fundamental part of the school curricula from kindergarten through twelfth grade in every school district in the country.

We must also focus upon the mass media, particularly television. By the time teenagers graduate from high school, they've spent more hours in front of the television set than in the classroom! But, when do they see responsible representations of sexual decisions? And when do they hear about contraception—the dreaded "C-word"?

**E**asier access to contraception must be another priority—access without any barriers. We must establish many more school-based health clinics that provide contraceptives as part of general health care. There are only about forty of these clinics now, but they work in reducing pregnancy rates and school drop-out rates.



**While the appropriations for the Defense Department in 1985 reached \$295 billion, the budget for all federal family planning programs was \$622 million, a mere two-tenths of one percent of the defense budget.**

President Reagan has consistently opposed federal funding for contraceptive programs. His opposition even extends overseas to the developing world, where the most impoverished peoples on the globe are suffering the misery and desolation that result from rapid population growth.

I recently visited Southeast Asia and Africa, where I saw a growing mirror image of what is happening in this country. I saw the breakup of extended families because of mobility—people move to the cities seeking opportunities and find none—generating a sense of frustration, anger, and hopelessness. I saw the creation of a subculture of society that will certainly challenge the resources of developing countries struggling to build a better life for their citizens. At the same time, increases in the rates of pregnancy and childbearing among young unmarried people are beginning to emerge in the developing world.

It is encouraging that, since the late 1960s, more than one hundred countries have instituted national family planning programs, encompassing 94 percent of the developing world. And, in some countries, the success has been amazing. In Thailand, for instance, in less than two decades, the annual population growth rate was re-

duced from over 3 percent to less than 1.9 percent.

But we face a terrible irony. Just when so much of the world has come to accept family planning—espoused by the United States government for more than twenty years—the U.S. government has completely reversed itself.

Now, says our administration, population growth is *not* a significant factor in the world's development problems. Now, says our administration, free enterprise is the panacea. Our leaders point to countries like Singapore and South Korea as shining examples of how a growth in capitalism results in population declines. But they fail to mention that, at the same time these countries invested in economic programs, they also invested in family planning programs.

So, why the preference for blind rhetoric over fact? Why the decision to eliminate U.S. funding for international family planning agencies that serve 81 percent of the developing world's population, excluding China—agencies that use their own private funds for abortion-related activities?

The answer has nothing to do with the use of federal funds for abortion. Since 1974, the law has pre-

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# THE CHALLENGE OF BIOTECHNOLOGY

Advances in science often require advances in ethics, according to this AHA 1986 Distinguished Service Awardee.

FRANCIS CRICK

**I**n the broadest sense, the manipulation of biological organisms is almost as old as humanity itself. Humankind's early efforts—the making of wine, cheese, and bread; the domestication and breeding of plants and animals—were almost entirely empirical. What has transformed the subject has been the discoveries of modern science and, in particular, the rapid development of molecular biology, based upon our deep understanding of the physics and chemistry of mild conditions. In the past few years, this understanding has led to a series of new and powerful techniques which are likely to transform the whole of biological research.

To understand these developments, we must grasp, if only in outline, the scientific roots of biology. Each chemical reaction in a cell is controlled by a particular enzyme. Each enzyme is a member of the protein family. Each protein consists of one or more polypeptide chains which have folded themselves up to form the precise three-dimensional structure needed to carry out the required catalytic activity. Each polypeptide chain is comprised of twenty units, called amino acids, joined end to end. To obtain the correct protein, the cell must assemble these amino acids in the correct order.

How is this order determined? This is the main function of the genetic material. The order is coded on a family of very large molecules, collectively called DNA (deoxyribonucleic acid). The cell makes a working copy of a particular stretch of DNA onto a sister molecule called RNA (ribonucleic acid). Any particular messenger RNA is then used to direct, by elaborate biochemical machinery, the synthesis of the protein for which it codes.

The DNA and RNA messages are written in a four-letter language, each letter being a small chemical side group, called a base, attached at regular intervals to a regular backbone. The chemical formula of the four types of side groups are usually abbreviated for DNA to the four letters A, T, G, and C. There are two chains in the double helix of DNA—the bases on each chain being paired using the pairing rule A with T and G with C. Thus, a single unit within DNA is called a base pair.

To recapitulate, a gene is a particular stretch of a long piece of DNA (or, for some small viruses, RNA). A typical gene is, perhaps, a thousand or more base pairs long and codes for a protein, a large organic molecule containing several thousand atoms. Many proteins are organic catalysts, or enzymes, though some are used for structural and other purposes. The four-letter language of the nucleic acids, the twenty-letter language of protein, and the little dictionary which relates the two languages—the genetic code—are, with minor exceptions, the same throughout nature, from viruses to humans.

Recent developments are often referred to as *recombinant DNA* discoveries. With these techniques, a particular piece of DNA can, with a little luck, be recognized, cut out, joined to other bits of DNA (such as the DNA of a virus), added to other cells, and often incorporated in the cell so that it can function to produce its specific protein there. Other techniques allow us to sequence rapidly any particular stretch of DNA. Given the sequence, we can translate the appropriate parts of it, by using our little dictionary, to obtain the amino acid sequence of that particular protein. These DNA sequences are now recorded in central computers. So far, the total length



stored there, from all over the world, amounts to about six million base pairs. Another powerful new technique uses monoclonal antibodies. Each is a pure protein which can recognize part of the outside of some large macromolecule, such as another protein.

**W**here are these new techniques likely to lead? On the academic side, we may expect many more genes to be isolated and mapped. This has already been done completely for the DNA of human mitochondria, about sixteen thousand base pairs long. (Mitochondria are little organelles present in all our cells—the powerhouses of the cell.) There is now talk of promoting a large effort to sequence the entire human genome, a total length of three billion base pairs. In any case, human DNA is likely to be mapped—meaning the ordering of large fragments of DNA—before the end of the century, and by then many important human genes will have been sequenced as well. Only time and money stand between us and knowing the composition of every gene in the human genome. Comparable efforts will be made on other animals, from *Drosophila* to mice, and on certain plants and organisms.

In the immediate future, we may expect to see better methods of diagnosing diseases and, hopefully, of curing some of them. The cure or prevention of at least the most widespread tropical diseases, for example, should be possible, given sufficient effort, and is likely to have a very large social impact. We can already recognize certain genetic abnormalities in the early fetus, and we may expect to be able to recognize many more. We should be able to improve plants, for example, by making them resistant to certain in-



**Eventually, the process of aging, which is unlikely to be simple, should be understandable. In fact, in the next century, we shall have to tackle the question of the preferred form of death.**

sect pests, and to improve our domestic animals, for example, by improving milk yields. Eventually we may be able to make proteins cheaply enough that they can be used in industrial processes.

Before long we may expect to be able to recognize the biological basis and, with luck, to cure or prevent types of senility such as Alzheimer's disease. We may expect much better methods of coping with cancer and cardiovascular disease. Eventually the process of aging, which is unlikely to be simple, should be understandable. Hopefully some of its processes can be slowed down or avoided. In fact, in the next century, we shall have to tackle the question of the preferred form of death. Moreover, the increasing age of the population will transform the nature of society.

It has been suggested that, starting from a cell of an adult, we could produce another genetically identical individual or a clone of an individual. At the moment, this is hardly possible with frogs. For human beings, it looks almost insuperably difficult and is not likely to be possible in the foreseeable future. Nor is it obvious that this would be a desirable thing to do.

It is possible that we can add genes to an adult human being to cor-

rect some genetic defect, but altering a gene in the gene line to produce improved offspring is likely to be very difficult because of the danger of unwanted side effects. It would also raise obvious ethical problems; however, such problems are already with us since we can eliminate certain defective genes using fetal diagnosis and early abortion. But, would it be ethical for parents to choose the sex of their unborn child in this way—for example, by aborting the fetus if it were the unwanted sex?

In the long run, these new methods will lead to an extraordinary explosion of detailed knowledge in many branches of biology. We can expect very rapid advances in developmental biology and neurobiology, although a detailed understanding of the brain will probably have to wait until well into the next century.

It seems probable that brains are nothing more than neuronal machines.

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*Dr. Francis Crick received the Nobel Prize for Medicine in 1962 for his pioneering work, with Dr. J. D. Watson, in the discovery and description of the DNA molecule. This article is adapted from Dr. Crick's 1986 Distinguished Service Award acceptance speech.*



# IS U.S. AND SOVIET DEFENSE COMPATIBLE WITH SURVIVAL?

Excerpts from an address delivered to the Forty-Fifth Annual Conference of the American Humanist Association, April 6, 1986

DANIEL ELLSBERG

No. If I really wanted to press that simple point home, I think I could best do it by stopping now. I will reiterate that I believe that is the correct answer: they are *not* compatible with human survival. The next question is, of course, can they be changed? That is a difficult question to wrestle with. I find it is the kind of question I have dealt with practically, theoretically, and conceptually for a large part of my life. It's not easy to answer.

I won't spend the time today to list all the various times we have threatened to use nuclear weapons, except the notable case of Quemoy in 1958 and earlier in 1955. Then, the issue was to prevent the Soviets from carrying out a promise to retaliate with their nuclear weapons if we used our nuclear weapons against their Chinese ally in the course of our intervention in the Chinese civil war. The Chinese argument was over who owned the islands of Quemoy. Both Chinese parties, Chiang Kai-shek and Mao Tse-tung, agreed that Quemoy belonged to Mainland China. The issue was who was the government of Mainland China: Chiang Kai-shek, temporarily on Taiwan, or Mao Tse-tung.

The part the United States played in that civil war was to say that, if Mao Tse-tung took by force the islands of Quemoy, which were being used, meanwhile, as jumping-off points and as intelligence gathering points for Nationalist operations against the mainland, then the Soviets *must not* give their Chinese allies nuclear weapons with which to reply. The Chinese had asked for such weapons from the Soviets. Khrushchev refused them, and that was a major

aspect of the Sino-Soviet split which began to develop during 1958 and 1959. Today, Chinese Nationalist troops are still on the islands of Quemoy. Therefore, in the long term, our intervention was a success, and, in view of the political consequences which have been very favorable to us, it was a major success.

Reagan, in fact, may have known a good deal of this when he ran in 1980, because one of his most frequent speeches was to say that he would try to restore our defenses in such a way that we could operate as Eisenhower did in the Quemoy crisis of 1958. That's a rather obscure reference. How many people today would really have known what he was talking about? Did *Reagan* know what he was talking about? I'm not certain. I can be certain that it is an obscure enough reference that I would guess that somebody had told him about it. The people who not only wrote his speeches but who were advising him then and now were people who knew very well what the Quemoy crisis had been, and they knew something the American people did not: that it had been a nuclear crisis.

What was at stake then was not only the question of who would control Quemoy, or what our relations with the government of Nationalist China on Taiwan were, but whether or not there would be a nuclear war. President Eisenhower had, in effect, passed the trigger of our American nuclear weapons to the Chinese and the Soviets by saying, "It's up to you. If you try to invade Quemoy, if you blockade to a point, the blood will be on your head. Our reaction will be automatic. We will use nuclear weapons." That message was conveyed to the Chinese. There was one other fact that made it even more likely that we would do it: President Eisenhower had authorized



the Joint Chiefs to *plan* on the use of nuclear weapons, a fact which is regarded as classified by the Pentagon to this day—almost thirty years later.

Why is this still classified? Because no president has trusted the American people to agree with him that the specific instances in which he was threatening to use nuclear weapons justified that threat, justified the dangers, justified the implications for human death and devastation. Some would have agreed with him. Certainly, if people could have foreseen the happy consequences in the way I've described them, many others would have said, "All right. It's justified by success, by the consequences." Others would not. And at least a minority would have actively opposed him.

I've said it before and I will say it again: the greatest evidence I take for hope in the possibility of changing these policies and reducing our risks is the belief of every president—which I believe is a valid, reasonable, or realistic belief—that their current existing policies could *not* achieve democratic support and acceptance *if they were known*. This really means that the American people would not accept them. And I believe that's right. Twenty years ago I had hoped it was right. Now, I more and more believe that it is right, that the secrecy *has* been necessary and that if we reduce that secrecy we have the chance to act democratically in a way to change these policies—to do just what the president fears and to reduce these risks.

## THE REAL USE OF NUCLEAR WEAPONS

The Quemoy case was only one of a dozen or more specific instances in which presidents threatened the imminent use of nuclear weapons in an ongoing crisis. Nearly every one of them was kept secret from the American public. This means that we have *used* those weapons a dozen or more



**The point of view that nuclear weapons have no uses other than deterrence is held by very intelligent, very informed people. I think they are wrong.**

times since Hiroshima.

We have used them the way you use a gun when you point it at someone's head in a confrontation. Whether or not you pull the trigger, you are using the gun. In fact, if the other side or the other person backs down without your having to pull the trigger, that is the best possible use of the gun. It most justifies why you bought it and encourages you to buy more and use it again.

This contradicts, by the way, the position of a number of people who are on my side of most defense issues—people who are against first use, for a freeze, for reductions in nuclear weapons—prestigious people such as Robert McNamara, for whom I used to work, George Kennan, many scientists such as Herb York and others whose position is that these weapons *have no uses* other than deterring nuclear attack. Anything that we have above that use is simply unnecessary, superfluous, excessive, and an indication of the mindless inertia of these bureaucratic processes. I don't know whether they really see that as hopeful or not, but it gives you one point of view in understanding the problem.

We who want to see these weapons stopped in development and reduced in supply are not opposing hu-

man purposes and interests, powerful as those might be. We are only opposing the kind of inert, mindless, purposeless processes to which we can offer, instead, intelligence, efficiency, and analysis. As I say, this point of view that nuclear weapons have no uses other than deterrence is held by very intelligent, very informed people. *I think they are wrong.*

The weapons, as the right wing and the hawks proclaim, *do* have uses that go beyond deterring nuclear attack. They *do* have consequences, some of which are seen as desirable by the people who buy these weapons and procure them and deploy them. The uses have been effective in various cases, have achieved what was wanted—as in the Quemoy case and in a number of other cases, though not in every case.

I happen to think that what I've just said is the reality of the situation. I believe what I think is your humanist credo: that we will do best by learning from our best current understanding of reality and from unceasing attempts to improve that understanding.

What is the objection, then, if such threats can work and can achieve American objectives? What's wrong with these threats? After all, no war has occurred yet, and, even when we



failed, we didn't carry out the threat. I don't think, by the way, that that means we were always bluffing, by any means. Mostly, our enemies backed down.

The objections are twofold. One is indicated by the effects of carrying out the war plan. These plans are preparations in support of a readiness and a willingness, indeed, a commitment, to kill—ignoring nuclear winter and looking only at the direct blast effects—on the order of six hundred million people. That's a minimum from our weapons. That's a hundred Holocausts.

I was confronted in 1961 with the awareness that the friends with whom I worked, drank, and kidded were Americans—mostly uniformed—who went home to their families in the evening but who spent their days making plans to kill six hundred million people. They remained the same people that I knew the week before and the week after, but, ever since that realization, I have wrestled with the question: how did we come to this? I can't separate myself from it. As an American, as a taxpayer, and as a citizen, how did I get into this? And the answers I can offer are not entirely discreditable. But whatever the reasons, they have brought me an intolerable, unbearable situation, and, of course, the same applies to them, too. I didn't learn that they were inhuman monsters or animals of some sort.

Let me comment on this common epithet. Do you realize that animals—lower animals, as we say with our sense of progress—don't kill six hundred million of their own species? Actually, they tend not to kill any members of their own species; such violence is a peculiarity of our species and clearly not a sign of progress. When other species kill other species, they do it almost entirely for food. Americans don't kill humans for food; they don't eat them. They have a great variety of reasons for killing an enormous number of people.

The moral aspects—trying to understand this ethically—are something

which I have been trying to come to grips with for a good twenty-five years. The other side is the prudential aspects—the risks involved for ourselves, for our own families, for our own country, and for the world.

## THE NEW THREAT

I believe that the choices being made today, choices supposedly being made rationally, systematically, and bureaucratically—not only by Reagan but by the Democratic administration that preceded him in the last two years of the Carter administration (which adds up to almost a ten-year policy)—significantly increase the chance that nuclear weapons and American nuclear weapons will be exploded in some crisis that could be next week or next month. However, these choices, on the whole, won't come into fruition until the early 1990s. There exists a new set of nuclear weapons which, I think, very significantly increases the instability of the nuclear balance and the chance that nuclear weapons will be used in a crisis. I believe our risks are going up. And whatever you thought the risks were in the fifties, sixties, and seventies—you may well have been right, whatever your guess—I put it to you that those risks should be seen as getting higher over the next ten years.

Most of these weapons are designed for the mission of making our nation credible by improving our ability to carry out the U.S. initiation of strategic nuclear war. That's true of the MX missile, rather obviously. It's also true of the D5, or Trident II missile, which has not yet been tested. It does not yet exist, you might say, except in many billions of research dollars, but it is coming closer to test and will be deployed in 1989. It is a missile that threatens—which has the accuracy from a submarine—to destroy Soviet hardened silos (Soviet missiles in their silos) before those missiles are launched. There is no benefit in de-

stroying a silo that has already launched its missile.

The only use for the enormous money and significant ingenuity that is going into this is to create the capability to hit that missile before it has been launched despite its being protected by concrete in the silo and, thus, to serve in an American first strike. We are building the Trident II not because we want a first strike but only because we want to *threaten* the first strike. And why? To assure the Soviets that if they retaliated to our little tactical nuclear weapons—such as a neutron bomb with a relatively small killing radius—when used against their allies, they would risk our escalation by the Pershing, a very accurate intermediate-range weapon, or Cruise missiles. And if they retaliated to that, they would be risking our using our first strike.

The hopes, of course, are that, faced with any such risk, the Soviets would back down. Certainly, our leaders see in every such instance they can imagine that justice would be on our side, that the Soviets should, in a moral sense, back down and, if they don't listen, that we then want to make sure that in a practical, prudential sense they *will* back down. But this is not the real essence of the issue. Whether our leaders *think* they are in the right or whether they *are* in the right is not the issue.

Let's talk as humanists about consequences. We are building machinery for carrying out the initiation of nuclear war against the Soviets, and the Soviets are, in fact, building comparable machinery several years behind us in each case. Unlike the *Challenger*, which was not designed to explode under any circumstances, or a nuclear reactor, which is not designed to explode although we know it could have a core meltdown by accident, these nuclear weapons *are* meant to explode under some circumstances. These circumstances are rather definable politically, and, where they are not, they are circumstances of responding to a president's—a *human* president's—de-



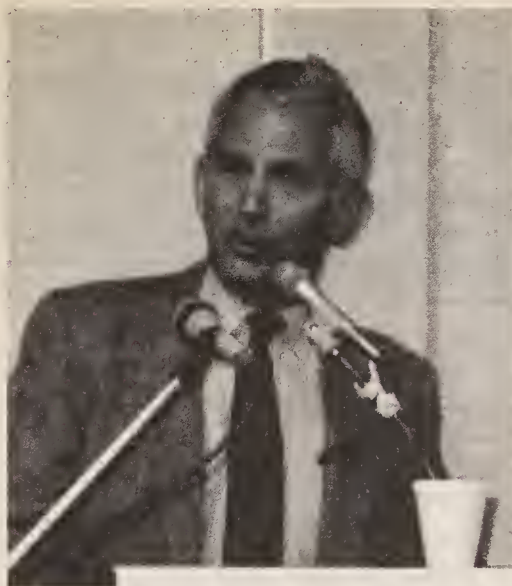
termination to explode them.

If the Soviets and every other opponent that we have made such threats against—such as the Chinese or the Koreans or the Indochinese—back down, if their successors in the Third World always back down, then the likelihood is very low that we will explode our weapons. The Soviets back up most of those people, though, and they spent a *trillion* dollars with the precise, explicit human motivation of never again having to back down as they once did in Cuba. That does not mean that they won't. We can hope, and I *do* hope, that they will back down in such a confrontation, just as I would hope that we would back down or that somebody would back down.

I don't have a religious basis for confidence, as do many of my friends, that that will always happen. How does religion come into this? Well, it follows from what I said that, if somebody doesn't back down and the threat gets made, we lose maybe not all life on earth—maybe humans survive—but we lose half a billion people or a billion or two billion—half the world's population. I wish I had a basis for assurance and confidence that this could *not* happen. But I don't.

We can look then to the human species itself—its qualities of compassion and concern and intelligence and rationality and freedom. That is the basis for the hope that I feel. It's not a basis for assurance, though. So, I guess humanism isn't my religion in that sense, and, if it's not my opiate, I don't have one. And it isn't that I don't feel the need for one. Very often, as Marx said, religion is the heart of a heartless world, the opiate of the masses. It fulfills a quite desperate need to believe that there is better than a chance to believe that somehow we *will* go on. As I say, I simply don't have that, and I don't know how many humanists do.

But I think that the reality we are facing is a reality in which humans are preparing to extinguish this species and all others or a very large fraction of themselves and others. We are preparing that. Our tax dollars are prepar-



**There is nothing we do with greater urgency or on which we expend more funding and comparable ingenuity and brilliance than devising schemes to end most life on Earth.**

ing it. We have no project in this society in which more people, more scientists, more engineers, more rationalists, or more religious people are engaged. There is nothing we do with greater urgency or on which we expend more funding and comparable ingenuity and brilliance than devising schemes—for the best of purposes, as our president sees them—to end most life on Earth, or perhaps half of it or all of it.

This is a challenge to an American's faith in democracy because we do have more democracy than almost anybody else—not really quite everybody but as much as any large country has ever had. It hasn't protected us nor has the faith some people have in capitalism. And socialism doesn't look better on this score. To the extent that Soviets can be called socialists, which is obviously very problematic, a lack of capitalism has not protected them. And certainly rationalism, scientism, and technologism have not protected the Soviets from exactly comparable choices. This is not to say that their policy is exactly the same or has exactly the same motives, but we are talking consequences here. Their weapons will have very comparable consequences if they go off. They are designed to go off in certain circum-

stances, and those circumstances seem to be very possible. But more than just possible, these circumstances seem *increasingly* possible—constituting a challenge, then, to almost any kind of faith.

### A CAUSE FOR HOPE?

Really, I could hardly find any basis for hope in the current situation given the recalcitrance of our policies in the face of the largest movement for social change that we've probably ever seen—the Freeze Movement here and in Europe—and that movement's almost total lack of favorable consequences that anyone could point out. It's very hard to find a basis for hope for change in those circumstances, and many people have, in effect, given up hope. I understand what they feel. But I will say that this brings immediately to mind—and this has a hopeful sign—the last time I felt this way, and that was the year after the Pentagon Papers were given out.

I have, in fact, felt quite hopeless since this past fall and part of spring for a variety of reasons, one of them being the media's neglecting to publicize the fact that the Soviets have



finally done something I thought so important for them to do. I'd been urging it by taking every occasion I could to suggest to the Soviets, to the point of going and doing civil disobedience in the Soviet Union, that they should initiate a moratorium on nuclear testing and call on the United States to join them. They should create a new environment for U.S. decision making to take place in—one in which the Soviets were not testing and were, instead, confronting the United States clearly with the choice: "If you test after a certain deadline, that has clear-cut, unequivocal consequences. If you don't test, *we* won't test. If you do test, the arms race goes on. The choice is now yours." Pass the trigger on the arms race, if you like, to the United States.

My suggestion to the Soviets was not in the spirit that would cause Reagan to pick up that challenge, then or now. But I had learned, in 1969, 1970, and 1971, incontrovertibly, that I had been wrong: the president was *not* the state or the king or the government. We did have other branches, and the public informed was sovereign and could change those policies through Congress.

The Vietnam War was changed, was ended, by Congress cutting off the funds for the war—actually for the bombing and for military operations in Indochina. This was done against the will of presidents as powerful and determined to continue the war as we had ever had, and it ended the war. The Vietnamese, with all their courage and determination—no stronger, more efficient, more dedicated revolutionary force had ever been seen—could not end that war by themselves. They could not stop our bombers from flying. Only the American people could do that. And the American people *did* do that. *We* did that. As Nixon said accusingly, the American people took that war away from him.

The American people did that. It was unprecedented. It showed that it was possible. We are *not* able to say now that certain things are not possi-

ble if the president doesn't want them. It was plausible before and it is plausible now to an approximation. But, you can't say it's impossible and therefore we are now relieved of responsibility for acting as humans to change a policy unless we can get the president to agree, because it has happened once!

## DEFUNDING THE ARMS RACE

The fact is that the funds were cut off for the Vietnam War and therefore could be cut off now for the arms race. I believe that that is the way in which the arms race will stop—if it does. I think it will have to be by Congress cutting off money, probably from a Democrat as much as a Republican president. Congress will have to be willing to do it, and that means the public must define this as a high enough priority, which they haven't yet done as they did in the case of Vietnam. The public must determine that we cannot spend our life's work, our energy, and our tax money in pursuit of this reckless, immoral, evil, and dangerous activity. It must stop. Congress has the ability to do it.

The two presidents could, in fact, stop the arms race in their next summit meeting, whenever that is. Statements that you can't do that in forty-eight hours, that it takes months and years of negotiating the details, are false. They are deceptive statements. Reagan could have said to Gorbachev at the last summit, "We will not test nuclear weapons underground, nor ballistic missiles, if you don't." And if Gorbachev said, "We won't do it, if you don't," the major part of the arms race would be over in the time it took them to shake hands. It could have been settled in that first meeting. Remember when Reagan had his coat off and Gorbachev was getting up? By the time they got to the door, the arms race could have been over. That's how much negotiation was necessary, considering that Gorbachev had made both of these proposals before and was

not testing nuclear weapons at that time.

You can't be sure that he would have agreed. But you have reason to believe that he would have, and, in any case, this would have amounted to testing whether he meant what he said. Reagan isn't going to do that. He doesn't want the arms race to end because he believes we need these weapons to threaten. He believes it with all his heart, sincerity, patriotism, and whatever. I don't think that's going to change.

Pat Schroeder of Colorado has initiated a bill calling for cutting off funding for the testing of nuclear weapons unless the Soviets are testing. That bill bypasses the president, although it relies upon him to say that the Soviets aren't testing.

Let me ask a question of you. How many people have not been aware of the following fact: the Soviet Union, having stopped nuclear testing on August 6, 1985, and proposing both an open-ended moratorium if the United States joined it and comprehensive test-ban negotiations for a treaty, has *not* tested nuclear weapons since this past August? I've been asking that question for the past eight or nine months, and I'm never surprised at how few people know this. It's too bad that it hasn't been well known, because, of course, the moratorium finally expired March 31. There is no arms race today. But, there will be when the U.S. tests its next weapon.

That's the choice the American people face. Talk about choices and consequences: it's rather clear cut. The president has every reason to believe and every reason to find out if it's true that the Soviets will not test if we do not, and he knows there has been no testing until now.

CONTINUED ON PAGE 35

*Daniel Ellsberg is a world-renowned economist and peace activist. He is perhaps best known for releasing "The Pentagon Papers" in 1971. Today, he serves on the strategy task force of the Nuclear Weapons Freeze Campaign.*



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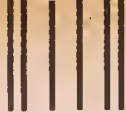
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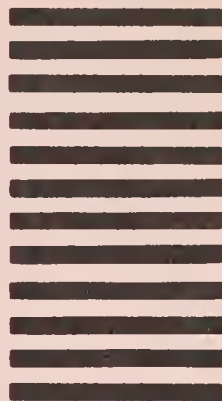
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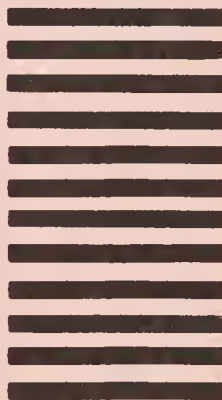
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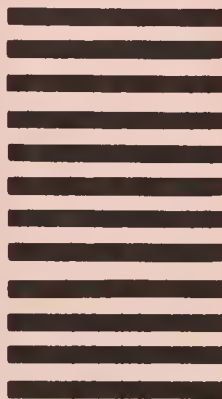
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# SCIENTIFIC ILLITERACY

The 1986 Humanist Pioneer Award recipient weighs the real costs of pseudoscience to today's students.

FREDERICK EDWARDS

**T**he world today, and especially the United States, is in the midst of a period of dramatic scientific, technological, and social change unparalleled in human history. Numerous new discoveries, developments, and ideas have converged at once on humanity and have begun to alter the way the world thinks and operates.

In many ways, the social changes we are experiencing have been fostered by new technologies which, in turn, have been made possible through recent scientific discoveries. Much has been written about how our lives, values, economic relationships, and sense of our place in the world are being transformed by such things as effective birth control devices, surrogate parenting, robotics, high-tech farming, alternate energy, satellite communication, and computerization. Our children will be even more affected. Each new technology has traceable roots in modern science. For example, the discovery of the DNA molecule made possible gene splicing and the patenting of new life forms. Discoveries in physics made possible television, computers, some forms of alternate energy, and space exploration. Discoveries in biology and chemistry made possible developments in drugs and medical technology. Discoveries in botany and chemistry are making possible new foods and energy sources. The list goes on. Clearly, we are living in a world revolutionized by science.

And yet, isn't it ironic that most people living in this world or even in the United States—the most scientifically and technologically advanced nation on the globe—do not understand the scientific method? Even literate people—people who have had thirteen years of formal education in our society, read books, heard

lectures, watched television documentaries, and perhaps even attended college—often still do not understand the way science works. Furthermore, they rarely have even a conversational knowledge of some of the most significant scientific discoveries or major theories of our century.

How many people could tell you much, if anything, about charmed quarks, gluons, black holes, quasars, cladistics, punctuated equilibrium, genetic drift, recombination of DNA, or something called *Australopithecus afarensis*? Yet, these words involve matters that spell the transformation of our knowledge of physics, the universe, the classification of life forms, evolution, chemistry, and the origin of our own species. Why don't most people know about them? Why aren't our children assigned the book Albert Einstein wrote that explains relativity in terms understandable by anyone with a high school education? Why are people, instead, told that Einstein's theory is too esoteric to be grasped by the general population?

Is it that most educated people, particularly Americans, aren't interested in science? Is it that they don't care about theoretical things, new developments, and the frontiers of knowledge?

*Nonsense!*

They care very much about these things. It is just that for some reason their attention has often been directed away from the exciting realm of real science and toward the fantasy world of pseudoscience.

The same people who couldn't tell you what a gluon is to save their lives could tell you volumes about pyramid power, iridology, biorhythms, kirlian photography, psychokinesis, and flood geology.

Who are these people? *We* are these people. *We*



have all suffered together through the same education and the same culture, and this is the kind of food for thought we have been served. It is time to recognize that we have not been served well, that we have legitimate grounds for complaint, and that we must act now to ensure that the next generation is not raised on the same paltry fare.

**I**t is inexcusable that, in such an advanced nation as this, it becomes headline news when the California state superintendent of public instruction wants to have evolution adequately covered in science textbooks. Should this still be a controversial issue? Are there really reasons why he shouldn't want to do it? Does it make sense to think that the voters might throw him out if he gets the state to stop using substandard teaching materials?

Yet, it was indeed a controversial issue when Bill Honig launched a program to improve the quality of education in California. There were those who, believing the earth and universe to be a mere ten thousand years old, were offended at the notion of millions and billions of years of change. These same people, believing that almost the entire fossil record was laid down within a single year during a worldwide flood occurring around 4000 BCE, were offended at the notion of the geologic column. And it was these people—believing that life forms must have been specially created, yet that all life on the planet today is descended from a few “basic kinds” of plants and animals that survived that flood in a big boat—who were offended by the teaching of evolution. These people, the so-called scientific creationists, have had tremendous political clout. Their major legislative effort, the Louisiana creationism law, will now come before the U.S. Supreme Court. They have caused havoc in our public

schools from coast to coast and are not about to stop.

In the face of this we must ask, “Whose educational system is it, anyway?” Does it belong to the people, or to the pseudoscientists? Is the job of education to provide state-of-the-art knowledge in each area of study, or should the focus be to avoid conflict with vocal religious minorities who have a very different agenda for our public schools?

You can't answer these questions until you have looked closely at the science textbooks used in the United States and, because Canadian schools buy from American publishers, in Canada as well. It is these textbooks that are responsible in part for today's current widespread scientific illiteracy. And it is this scientific illiteracy that has made possible the growth of pseudoscience.

If you have not read a public school science textbook lately, you are probably in for a shock. Certainly the scientists and educators who challenged the textbooks submitted for adoption in California were taken aback. They could not believe that modern publishers would offer such inaccurate and ill-conceived material under the guise of science education. Let me provide a few examples.

One textbook stated that scientists “believe dinosaurs to have inhabited the earth.” This sounds more like a confession of faith than a position based upon evidence firmly established in our body of knowledge since the Renaissance. Yet, when complaint was made about this at a textbook hearing, one defender of the book declared that frequent use of the phrase “some scientists believe” was quite appropriate because *National Geographic* used the phrase in its November 1985 issue and that ought to settle the matter.

This same man boasted that he had succeeded in firming up statements in one textbook. He had changed the sentence, “many scientists think that dinosaurs were the ancestors of modern reptiles” to the

more strongly worded, “scientists classify dinosaurs as the ancestors of modern reptiles.” What he didn't seem to know was that scientists do *not* classify dinosaurs as the ancestors of modern reptiles. Modern reptiles come from an entirely separate evolutionary line. Dinosaurs are the ancestors of modern birds.

Furthermore, most people seemed to miss the point that timid utterances about subjects related to evolution are not the way to be “scientific.” After all, none of the textbooks describe genetics as “the study of beliefs about the possibility of inheritance” or state guardedly that “most astronomers believe that Saturn has rings.” Genetics and astronomy are not as “controversial” as evolution (since there are fewer religious objections to current scientific conclusions in these areas), so statements are allowed to be bolder.

In any event, this is the sort of education our children are receiving. It is also the sort of education that members of boards of education had received. This became painfully obvious during the textbook hearings before the California State Board of Education, when one board member found perplexing the scientific view that the north and south poles have changed places several times in the history of our planet. She wondered why scientists couldn't make up their minds! She also found evolution unconvincing because she could not imagine how asexual life forms could ever evolve into male and female forms. Nonetheless, she said she was in favor of science because it had made possible cosmetics and skin creams.

**I**n a recent poll commissioned by the National Science Foundation, it was learned how woefully uneducated Americans are. Over 40 percent of those polled believed that “rocket launchings and other space activities have caused changes



in our weather" and that "it is likely that some of the unidentified flying objects that have been reported are really space vehicles from other civilizations." Forty percent agreed that "some numbers are especially lucky for some people." In the same survey, people were asked to rate their own understanding of a few modern technological terms. Eighty-two percent felt they had a general understanding of radiation, which is surprising since only 67 percent felt they understood how a telephone works. A mere 57 percent felt they grasped the workings of computer software, and only 49 percent felt confident talking about the gross national product. These results led organizers of a recent science conference, sponsored jointly by the National Science Foundation, the American Association for the Advancement of Science, the National Science Teachers Association, Pennsylvania State University, and others, to declare boldly:

Evidence abounds that we are graduating students who are unprepared and unable to grasp even day-to-day issues—the technical content of issues ranging from the safety of contraceptive devices or nutrition to robotics, gene-splicing, or the recent explosion of the space shuttle *Challenger*.

This has become a major concern in a nation so dependent upon science and technology.

But, as noted before, it is not a lack of interest in science that lies at the root. It is positive belief in pseudoscientific ideas, particularly those that are religiously motivated, and harsh opposition to mainstream science that is the real problem. So long as "scientific" creationists remain persuasive, the public will find it easy to buy into the notion that effective teaching of evolution constitutes "secular humanism." So long as science itself is sometimes viewed as "cold" and "materialistic," people will seek the supposedly



**Pseudoscience, in its own way, becomes anti-science. And if science research grants dry up, what will happen to the space program, nuclear technology, the search for fossil fuels and alternate energy sources, and development of new medicines?**

"warmer" ideas of mysticism, especially mysticism that they think is made possible through discoveries on the frontier of the "New Physics."

But there is more at stake here than simple public ignorance: there is the issue of the freedom of scientists to carry on their research. Some creationists want to require that for every dollar spent on "evolution research" an equal amount is spent on "creation research." They want national park guides to be required to give the creationist explanation of natural wonders side by side with the evolutionary explanation. And they want museums to carry creation exhibits to match the evolution exhibits.

What would be the effects of such policies? Since creationists hold that the universe is only ten thousand years old, this makes modern astronomy a joke. Since they reject radiometric dating as invalid, they contradict modern nuclear physics. Since they argue that Earth is only ten thousand years old as well, they are at odds with geology. Since they are offended by the human and animal family tree, they must oppose most of modern biochemistry.

Pseudoscience, in its own way, becomes antiscience. And if research grants dry up in these areas, what will

happen to the space program, nuclear technology, the search for fossil fuels and alternate energy sources, and the development of new medicines? What will happen to American leadership in these areas and, with it, the American economy?

Fortunately, American creationists, mystics, and other pseudoscientists cannot make scientific knowledge disappear. At best, they can only make it disappear from North America. They can only foster a scientific illiteracy that will hand world leadership to other nations, leaving us in the dust of history. They can only hamstring and retard new developments capable of eventually improving the lot of the world's peoples. They can't stop progress altogether. Humanity will survive and prosper in spite of them, even if none of us alive today lives to see the result.

But, somehow, I'm not consoled

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*Frederick Edwords is executive director of the American Humanist Association and a member of the board of directors of the National Center for Science Education. "Scientific Illiteracy" was delivered at the Forty-Fifth Annual Conference of the AHA in acceptance of the 1986 Humanist Pioneer Award.*

# THE IRRATIONAL BASIS OF ETHICS

The emotional, naturalistic basis of ethics offers alternatives to traditional moral and ethical systems.

LUCIA K. B. HALL

Moral and ethical systems attempt to provide answers to how and why human beings ought to behave toward one another. Many such systems have been developed during the course of human history. The justification for claiming that such systems are binding on human conduct has come from two different sources: by an appeal to authority or by an appeal to reason. However, I feel that neither appeal is sufficient to either justify or explain human ethical behavior and that no ethical or moral system can be simultaneously complete, consistent, and universalized.

In order to substantiate these claims, we need to explore the nature of both types of ethical systems and to discover why both types of systems must be either incomplete or inconsistent or both. We then need to explore our biological, evolutionary heritage to find the source of an ineradicable nonrational component intrinsic to all ethical systems and, in so doing, discover why human ethical systems can't be made universal. Finally, we will examine the concept of the ethical circle and its consequences for human ethical choices.

For the purpose of my discussion, I will define all systems of conduct that claim their justification from an appeal to authority as "authoritarian" or "moral" systems, while those that claim their justification from an appeal to reason I will define as "rational" or "ethical" systems.

## AUTHORITARIAN SYSTEMS

Moral rules are assumed to possess three features. First, they are complete: it is not necessary to look elsewhere than to your authority for answers to moral questions. Second, they are consistent: all moral problems have one and only one best solution. Third, they are absolute: these complete, consistent moral rules must apply to every human being capable of moral choice under all similar circumstances. The authority upon which moral systems are based may either be supernatural, consensual (by group consensus), or intuitional (by individual intuition).

Since the majority of the Western world believes that moral rules are the pronouncements of a supernatural deity and are of divine, rather than human, origin, we need to examine the characteristics of this ethical authorization in some detail.

A moral system based upon the belief in a supernatural authority assumes that there neither is nor can be any human input into the system's moral rules. Thus, believers in such a religious or moral system are held accountable to the system but not for it. Although its pronouncements must be followed to the letter to please the deity, the righteousness of this supernatural moral system does not need to be questioned. As a result, followers of such a moral system are curiously detached from any of the human consequences of their actions. As long as the "right" people are treated decently or indecently—cared for or murdered—according to the laws of the deity, the



religious believer has performed morally.

However, the ability of such moral systems to compel our obedience is of necessity only as good as the quality of the authority upon which they are based. If I were to claim that my god is better than yours and that, therefore, its authority is stronger, I would feel justified in murdering you if my god so required it. You would most probably wish to claim a higher authority for your god, and so on. The ultimate result of such an exchange is, of course, an infinite, omnipotent, omniscient god, such as that claimed by Christianity. It is hoped that embedding moral rules within such a god will make them complete, as there is no higher authority to go to for moral pronouncements.

However, the infinities contained in such a conception lead to paradox, as has been amply shown by both theologians and mathematicians. Since this paradox was reached in attempting to provide complete authority, a moral system embedded in such a god cannot be complete without leading to paradox as well. The best such a moral system can hope for is to be consistent without being complete.

Much the same argument can be given for consensual and intuitional moral systems. Their authority is even more limited and cannot be presumed to be complete. Thus, they can at best only be consistent.

However, history and science have shown that moral systems based upon appeals to authority have turned out to be nothing more than a particular culture's biases encoded into absolutes. These cultural prejudices—based entirely upon accidents of location, history, heritage, and emotional opinion—can be readily shown to be inconsistent. What is more, since these prejudices are held to be absolute, they are often expressed in violent abuses of human rights. Genocide is not an act undertaken by the uncertain. The mass murders brought about by leaders such as Hitler, Stalin, Khomeini, Jim Jones, and Pol Pot are mere-



**Clearly, authoritarian ethics are neither complete nor consistent, and, when they are held as absolutes, they are often highly destructive to human life and freedoms.**

ly recent examples. All these leaders believed that they knew the single, correct, ethical direction humanity had to take and believed that they had the authority to force everyone within the grasp of their power in that direction.

Clearly, authoritarian ethics are neither complete nor consistent, and, when they are held as absolutes, they are often highly destructive to human life and freedoms.

Before we leave this section, it is important to mention that appeals to authority are not a sufficient justification for the existence of the ethical impulse in humankind. Justification by a deity is, in fact, nothing more than a variation of the argument by design, and justification by human authority is nothing more than opinion.

## **RATIONAL ETHICS**

Attempts to build a code of conduct based upon rational thought are quite old. The roots of such systems reach at least as far back as the Stoics, who believed it was necessary for the human will to regulate emotion for the sake of inner peace. Even then, no emotion could be indulged in unless for

a rational reason. Modern attempts at building rational ethics are most clearly seen in rule- and act-utilitarianism and situation ethics.

Like their authoritarian moral counterparts, ethical rules are thought to be complete (since reason is assumed competent to answer all moral questions), consistent (because reason and logic are consistent), and capable of being universalized (the equivalent of morally absolute). Those rational ethical systems which claim not to be rule-based (situation ethics and act-utilitarianism) are still based upon reason and, hence, are subject to whatever shortcomings reason possesses. Rational ethics can also be developed by supernatural (provided one assumes the deity is rational), consensual, or intuitional means. However, since humanism is based upon the metaphysical assumption of naturalism, we will ignore supernaturally based ethics.

Any rational system that attempts to be both complete and consistent is called a formal system. Other examples of formal systems are logic and mathematics. If these formal systems can be shown to be both complete and consistent, then by analogy it is possible for rational ethics to be so as well. However, this is not the case. The



mathematician Kurt Godel showed in 1935 that attempting to create a formal system that provides both features leads inevitably to paradox. All formal systems contain within themselves undecidable propositions—that is, statements which are true but which cannot be proven to be true from within the system itself.

Therefore, if any formal system is to be consistent, it cannot be complete, and, if it is to be complete, it cannot be consistent. Reason itself can be shown to be such a system, since it is based upon logic. Thus, by their very nature, all rational ethical systems contain within themselves ethical questions that cannot be decided one way or the other. There are actions which may be ethical but which cannot be proven to be so by rational argument.

There are several pertinent examples which apply here. No ethical system can prove itself ethical (the classic Godelian paradox). No ethical system can prove that ethical systems should be binding. No ethical system can prove that ethical dilemmas must be dealt with. Just as mathematics cannot prove its substrate—numbers—must exist, no ethical system can prove that its substrate—human beings—must exist. And no ethical system can answer the question of why human beings have ethical impulses in the first place.

Thus, rational ethical systems cannot be complete. They can be consistent only insofar as the logic used to build them has been used consistently. But they can never be made universal, as will be explained in the next section.

## THE BIOLOGICAL BASIS OF ETHICS

Traditional religious belief has assumed that a deity was both the source and enforcer of the only possible right ethical system. As secular humanists, however, we need to dis-

cover a naturalistic explanation for the ethical impulse. Since the source of this impulse cannot be found in reason, we need to look to an irrational, emotional response that has evolved as part of the human species.

I believe the best candidate to be empathy. This ability to feel as another person feels, to be able to put yourself in their emotional situation, even to wince involuntarily when someone bangs their funny bone—this is the link that binds the human race together, that makes us care about how we act toward others. Empathy has been discovered in very young children. Toddlers, when they see their parent or other caretaker in distress, will actively try to solve the problem, either by rendering aid themselves or by seeking out an older and wiser adult. Interestingly, the trait seems to be selfishly motivated; an individual rendering aid to another is doing so partly to relieve his or her own empathic distress.

The empathic response is highly developed in human beings because children must learn nearly all of their behavior, even before language develops. It allows very important emotional information to be transmitted from the parent to the child. By observing his or her mother's reactions to his or her behavior and linking the emotions he or she empathically mimics with his or her actions, the child learns not only information important to his or her survival but information important to the survival of those upon whom he or she depends.

Since all human ethical and moral systems have been motivated by the empathic response, and since the empathic response is an evolved, emotional trait, it is clear that ethical responses are incapable of being universalized. Human beings must make their ethical decisions in the midst of life and often with incomplete information. The emotional response of empathy is the only method human beings have of cutting the Gordian knot of undecidable moral and ethical questions. But, our empathic response

is idiosyncratic and open to a wide range of influences, not all of which broaden its sympathy. Every human being will be more or less affected by a given empathic situation, and thus every human being will have different ethical goals and will choose a different ethical system to reach those goals. Even the choice of appealing to authority or reason to justify a particular moral or ethical system will be made empathically—and thus irrationally.

## THE EMPATHIC CIRCLE

The empathic response in a child is strongest toward those with whom the child feels some sort of identity. Very young children may sometimes have a stronger empathic response toward an animated character like Bambi or a stuffed animal simply because they identify themselves more with a small animal than with a large human adult. The empathic response in a child is also evoked more strongly toward those whom he or she knows well rather than strangers. This characteristic is often manipulated, as when the child is taught to "hate all the people his or her relatives hate." This is why dehumanization of the enemy is so common in war; a "non-human" human can be killed without compunction, the empathic response having been deliberately deadened.

All of us have around us what I call an "empathic circle," the circle of human beings around us to whom we feel our empathic response applies.

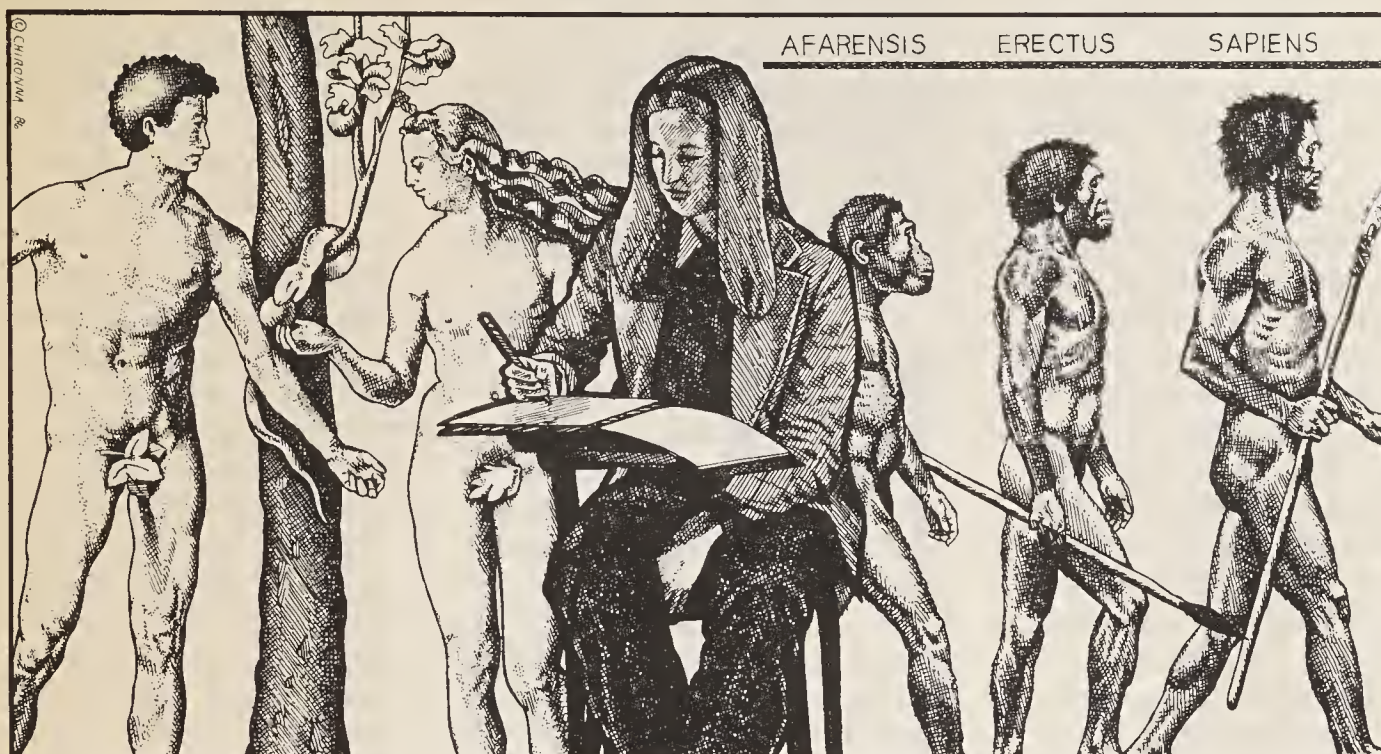
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*Lucia K. B. Hall derived this article, in part, from a workshop, "The Irrational Basis of Ethics," which she led at the 1986 AHA conference in Sacramento, California. In addition to her background in chemistry and research in mitochondrial and lipid biochemistry, she is an active member of the San Diego humanist community and lectures on science, religion, and ethics.*



A survey and comment about Old Testament and Mormon  
beliefs in Utah.



# WHAT UTAH CHILDREN BELIEVE

DUANE KEOWN

A

s a new class of students enters the secondary school or college natural science classroom, the teacher cannot know what "answers" are already in the minds of the students concerning Earth's beginning, the origin of life, the cause of the variation of human races—questions open to scientific inquiry that may have been previously answered for the student with the ready answers of some religions. In Utah, the Church of Jesus Christ of Latter-day Saints (Mormonism) has dominated the behavior of the people for nearly 150 years. What are the beliefs of the Mormon children of Utah as they enter science classes that may or may not, depending upon the bias of the teacher, introduce them to scientific explanations of natural phenomena that conflict with Old Testament and other Mormon theological answers? After many years of teaching biological science in Utah public schools, I returned to Utah and sampled beliefs held by Utah students that may affect their acceptance of answers derived by science.

The Mormon religion is a product of the American frontier in the past century; it is a hybrid of Old Testament beliefs and American idealism. It was begun in western New York by an intelligent, imaginative, but poorly educated farm boy named Joseph Smith. He had a believable testimony of his meetings with angels and other heavenly beings, from whom he said he received a divine record of pre-Columbian American history, which he called *The Book of Mormon*. He claimed to be a prophet and said that he had direct communications with God. With his divine history of America and claims of



revelations from God, he soon had a following and organized the Mormon church. Joseph Smith's ambition was to re-create in the nineteenth century what he perceived was a replica of the first Christian church of Old Testament times.

Almost immediately his claims of revelations, and Mormon behaviors based upon those revelations, brought his followers into social conflict with their neighbors and led to violence. For fifteen years and at five central locations, the reincarnated Old Testament society moved over midwestern America trying to establish a permanent settlement and live by the revelations of their prophet. At each new settlement attempt, the Mormons were first accepted by the local residents with sympathy and hospitality—if not with some skepticism. At their last settlement site in the Midwest, at Nauvoo, Illinois, the Mormons became strong in number. But their group consciousness was so strengthened by the persecutions during their many settlement attempts that they had grown to view those outside their religious order as their Gentile enemies.

At Nauvoo, the prophet Smith was at his zenith of power and influence over his followers. He instituted the practice of polygamy in his church society and, with his select and secret "Council of Fifty," he began to plan for a religious kingdom. His ambitious "Kingdom of God" was to rule the whole Earth at the time of the second coming of Christ. On June 27, 1844, while incarcerated in the Carthage, Illinois, jail, the prophet Smith was murdered by a mob of anti-Mormons. He became the martyr of the new religion, and Brigham Young became the new leader.

Under Brigham Young's able leadership and in the tradition of the important characters of their theology—Lehi of *The Book of Mormon* and Moses of the Old Testament—most of the Saints followed Brigham Young into the American wilderness. In the Great Basin of Utah, thirteen hundred

miles removed from its persecutors in the Midwest, Mormonism became a close-knit theocracy with Brigham Young as prophet and dictator. The members believed that their leaders were commissioned by God and that he was directing the building of the kingdom.

Mormon people retain many behaviors based upon beliefs that are rooted in the revelations they believe have been given by God to their prophets. The Saints believe that the president of the church is the modern-day prophet and that he is in direct communication with God. They believe the leadership of the Mormon church cannot be led astray. There have been very few revelations to the prophets of the church since the death of the first prophet. But Smith received plenty—from matters concerning the plan for the Nauvoo House, a large hotel, to an explanation for the origin of American Indians and the black skin of the Negro race. Since the late nineteenth century, most revelations have rescinded or changed revelations by prophet Smith that had become obstacles to the church's surviving in the larger American society, such as polygamy and discrimination against blacks.

Joseph Smith searched the scriptures of the Old Testament to model a new society after the old Hebrew Christian order which he believed was God's first and perfect society, established at Earth's beginning. Ironically, this was at the very time when science was putting into question the biblical story of creation and Noah's flood, explanations that today are viewed by most Christians as allegorical and symbolic answers that served people who could only view Earth and its life within the narrow confines of the

knowledge of their time. But on the American frontier, Joseph Smith, with divine guidance, was confirming the Old Testament order of things and even adding detail to the stories.

He wrote an update of the Book of Genesis, his books of Moses and Abraham. He explained the origin of the black skin of the Negro race. His *Book of Mormon* explained why the American Indians were dark skinned and called them *Lamanites*, descendants of Laman, the cursed son of Lehi, a wanderer to America from Old Israel at the time of the Fall of Babylon. Smith even rewrote the Bible, making corrections to the errors he said had crept into the text since the death of Christ. His revision of the story of creation is almost without change, except for his assertion that women did not come from the rib of Adam. Smith's version of the Bible, revealed to him by God only 150 years ago, confirms for the Saints the authenticity of the Genesis story of creation. Because of Smith's validation of the Old Testament, the Mormon people are asked to believe literally the three-thousand-year-old Scriptures and the additions to the story by the first prophet. Many of these beliefs are reflected in the behaviors of the Saints.

A brief look at some Latter-day Saint theological teachings will be useful in understanding how today's Mormons view the world. The two most influential Mormon beliefs are those associated with, first, a literal belief in visions, revelation, and prophecy and, second, a literal belief in the Book of Genesis, Adam and Eve, and the Flood.

In 1841, Joseph Smith was asked by a newspaper reporter to condense the doctrine and creed of Mormonism into a few principles. The condensation that he produced is now scripture to the Saints and is known as The Articles of Faith. Articles seven and nine read as follows:

7. We believe in the gift of tongues, prophecy, revelation, visions, healing interpretation of



tongues, etc.

9. We believe all that God has revealed, all that He does now reveal, and we believe that He will reveal many great and important things pertaining to the Kingdom of God.

Mormons are asked by their leaders to believe literally that Adam and Eve were the first parents of humankind. In the spirit world prior to the creation of Earth, Adam and Eve were picked by God to be the parents of the human race. When they came to Earth, it was pronounced to be perfect. All things on Earth would have remained so had it not been for Adam's transgression of eating the forbidden fruit, but that was in God's plan, too, since the sin began mortal life. Mortal life is a testing time for the spirit children who must come to Earth to continue their eternal progression and earn a rank in eternal heaven, the celestial heaven being the highest. According to Bruce R. McConkie's 1958 book, *Mormon Doctrine*, leaders of the church taught that the Garden of Eden was near Jackson County, Missouri. According to McConkie, as the prophet Smith and some of his followers stood on a rocky hill in Missouri on May 19, 1838, Smith told them that they were at an altar built by Adam. The secret temple rituals of marriage that the most devout Saints go through are a reenactment of the first marriage, that of Adam and Eve, which gave rise to the human race.

The history of the Mormon church is replete with admonitions to accept the Scriptures without question. The late president of the church, Joseph Fielding Smith, in a speech at the October 1954 General Conference of the Church, stated: "So far as the philosophy and wisdom of the world are concerned, they mean nothing unless they conform to the revealed word of God."

In an interview with Donald LaFeurre, the spokesman for the Church

of Jesus Christ of Latter-day Saints, I asked if Saints are expected to believe in a universal flood that destroyed all life on Earth save that which was aboard Noah's ark. His answer was affirmative. In fact, Mark E. Petersen, a late apostle of the church, published a book in 1982, *Noah and the Flood*, that makes it plain that it would be impossible to be true to the faith and to deny the mission of Noah.

The Latter-day Saints' priesthood is the most important institution of God's kingdom on Earth for the Saints. God's commandments are relayed to humankind through the priesthood. It is the male priests, elders, and high priests of the church who consummate marriages, perform baptisms, and give members patriarchal blessings that tell them of their hereditary lineage from Noah. In fact, Joseph Smith, through revelation, traced the lineage from the Old Testament prophet Abraham back to Adam, the first man. Smith's account is published in *Doctrine and Covenants*, part of the Standard Works of the church:

Abraham received the priesthood from Melchizedek, who received it through the lineage of his fathers, even till Noah; And Noah till Enoch, through the lineage of their fathers; And from Enoch to Abel, who was slain by the conspiracy of his brother, who received the priesthood by the commandments of God, by the hand of his father Adam, who was the first man. [84:14-17]

Smith's rendition of the Flood in his revised Bible adds little that is new to the Genesis story. But the fact that he claimed his description to be modern revelation disallows the Saints from viewing the story as allegorical as do most Christians of this century. Smith definitely was a literal believer in the Flood, for he mentions it in many of his writings.

Through interpretation of a revelation that was recorded in Smith's book

of Moses (8:16-17), later prophets and authorities of the church added an interesting development to the condition of Earth. It, too, needed immersion because it was corrupt like humankind. Brigham Young explained away any ambiguities that might have existed in the first prophet's revelation. His word was scripture when he wrote in the *Journal of Discourses* in 1854:

... We are of the earth, earthy, and not only will the portion of mother earth which composes these bodies get a resurrection but the earth itself. It has already been baptized. You who have read the Bible must know that that is Bible doctrine. What does it matter if it is not stated in the same words that I use, it is nonetheless true that it was baptized for the remission of sins. The Lord said, "I will deluge (or immerse) the earth in water for the remission of the sins of the people"; or if you will allow me to express myself in a familiar style, to kill the vermin that were nitting, and breeding, and polluting its body; it was cleansed of its filthiness; and soaked in the water, as long as some of our people ought to soak. The Lord baptized the earth for the remission of sins, and it has been once cleansed from the filthiness that has gone out of it, which was in the inhabitants who dwelt upon its face.

More recently, the tenth president of the church, Joseph Fielding Smith, Jr., added his rationale about the total immersion to sustain the members' belief that such an ill fortune could befall Earth in a 1954 book entitled *Man, His Origin and Destiny*:

It had to be a complete immersion, just the same as other baptism, so the Lord did two things, first he cleansed the earth of all



of its corruption brought upon it by the wickedness of "all flesh," and second, the earth having reached the age for such an ordinance, was cleansed from all the sin upon its face.

**T**he literal attention that Mormons must give to the Genesis version of creation and to Noah's saving of each kind of life has unwittingly placed them in the camp of the fundamentalist creationist movement. But modern science has for nearly a century been pulling the membership into two camps. At Brigham Young University, the bastion of modern Mormonism, one may hear a geology professor teaching about a 4.5-billion-year-old Earth and the evolution of life, while across the hall a theologian may be asking the students to pray for a testimonial to the veracity of the Mormon scriptures that are part of the Old Testament time frame of Earth's creation.

During the early nineteenth century, the time of the birth of Mormonism, it was a common belief on the frontier that American Indians and blacks were members of an inferior race. Through Joseph Smith's revelations, the outward physiological manifestations of these groups of peoples were explained in judgments of God based upon their unrighteousness in the past. According to Smith's *Book of Mormon*, the dark skin of American Indians originated with a curse upon one of the original Europeans arriving on the American continent. The book tells of the Hebrew, Lehi, who, with his sons Nephi, Laman, Lemuel, Sam, Jacob, and Joseph, left Jerusalem about 600 BCE. They sailed to America with their families and avoided the destruction of Jerusalem by the Babylonians. Both Laman and Lemuel became evil and incurred the wrath of God. As punishment, God cursed them with

dark skins and they and their descendants became filthy, idolatrous, and warring. The cursed descendants of Laman are the American Indians, or Lamanites, according to the book. But the son Nephi and his children continued to please God, and Nephi's descendants remained fair and delightful and were peace-loving farmers favored by the Lord.

Mormon theology traces the physiological characteristics of the Negro race into the spirit world before mortal existence on Earth. According to Bruce McConkie in *Mormon Doctrine*, those of Negro lineage are born through the sons of Cain, the wayward son of Adam who slew his brother Abel. They were cursed in the spirit world even before they came to Earth, McConkie says:

Though he was a rebel and an associate of Lucifer in the pre-existence, and though he was a liar from the beginning whose name was perdition, Cain managed to attain the privilege of mortal birth . . . he came out in open rebellion, fought God, worshipped Lucifer, and slew Abel. . . . As a result of his rebellion, Cain was cursed with a dark skin, he became the father of the Negroes, and those spirits who are not worthy to receive the priesthood are born through his lineage.

Joseph Smith received a revelation in December 1830 that tied blacks to the children of Canaan: "For behold, the Lord shall curse the land with much heat, and the barrenness thereof shall go forth forever, and there was a blackness came over all the children of Canaan" (Book of Moses 7:8). Brigham Young elaborated on the curse of Cain in his 1860 *Journal of Discourses*. He stated: "Cain slew his brother . . . and the Lord put a mark upon him, which is the flat nose and black skin." And, according to the apostle McConkie in *Mormon Doctrine*, the black race survived the Flood through the wife of

Noah's son, Ham. She was Egyptus, a descendant of Cain.

From 1835 until 1978, the precept of God's denial of the priesthood for blacks hung on the necks of Mormons, causing them ridicule and shame. Finally in 1978 the pain became too much and the welfare of the Mormon church was at stake. The precept was ended by a revelation to the modern-day prophet, Spencer W. Kimball. Journalist John Farrell described the day in "Utah: Inside the Church State," an article appearing in the November 28, 1982, *Denver Post*:

June 9, 1978, was the day grown men cried in Salt Lake City. Some heard the news on radio, pulled cars to the side of the road and wept with gratitude. Others wiped tears from their cheeks as they gathered in the grandeur of Temple Square. The city's phone system strained as Mormons from all over the world tried to call relatives to ask if it was true. Years later, just as that November day in Dallas, Saints can tell you precisely where they were and what they were doing when the prophet Spencer Kimball announced that the Mormon priesthood had finally been opened to the blacks.

**A**ccording to the Utah Office of Planning and Budget, in 1980 there was an increase in population of 36.2 individuals per thousand in Utah. In 1983, the population increase in Utah of 24.8 per thousand was totally due to new births. The Utah birth rate doubles the U.S. average and it rivals the rate of many Third World countries that we consider destabilizing to world order. It took from 1847 until 1970 for Utah to gain its first million people, but the current



exponential growth will give the state its second million people by 1992. Using the projected 1990 growth rate of 2.85 percent, in 156 years beyond 1985 the population of Utah will be 114,032,024, which is equal to what the entire population of the United States was in 1945. Utah schools cannot keep up with such growth. The number of pupils per classroom is the highest in the United States and, in a state that is rich in resources, the expenditure per pupil is the second lowest in the United States.

The Saints believe that each family should have as many children as the parents can adequately provide for. Defense for this behavior rests in four tenets of their faith. The first tenet is that there are great numbers of spirit children in pre-Earth existence anxiously waiting to take on a mortal life in the tabernacle of the human body.

The second tenet is a carry-over from the nineteenth century and is their literal belief in the beginning of the Millennium and the second coming of Christ in the not-too-distant future. Mormons share this belief with many other fundamentalist Christians. For the Saints, however, the belief means readying Earth and getting the backlog of spirit children into the present "Earth-testing-stage" within the Old Testament time frame of creation and judgment.

A third tenet, and one that is arrogant and repugnant to non-Mormons, is the Saints' belief that the spirit children who are born into a large Mormon family that lives the Mormon gospel are much favored by God.

And lastly, there is a commonly held belief that there will be greater glory in heaven for those parents who have been fertile and have not limited their families.

More compelling than any long list of theological reasons for having many children is the enormous social pressure brought by membership in the Mormon church. There is great social satisfaction in being as spiritual as your neighbor. Having a large family is considered spiritual, and it brings

acceptance in the church.

I lived in Utah for thirteen years. Beginning as a student at Brigham Young University in zoology, followed by ten years of biological science teaching and secondary school administration in the public schools of southern Utah, I was able to observe the interplay of Mormonism with the world of modern science and pluralistic American life. When the time for a sabbatical leave from my current position in science education at the University of Wyoming arrived, I returned to Utah to survey students in the Salt Lake Valley of Utah to see how prevalent particular Mormon and Christian fundamentalist beliefs are among secondary-school-age students. I examined beliefs that may affect students' acceptance of modern facts and theories concerning natural science, especially creation of Earth, life, and the human races.

To survey the beliefs of secondary-school-age students concerning creation, divine curses on certain racial groups, the rate of Utah's population growth, and other religiously derived concepts that may affect students' acceptance of natural science facts and theories, I became a substitute teacher in the Granite School District, Utah's largest. Approximately 50 percent of the students of Salt Lake City are Mormons. But in many rural communities, the school-age population of Saints is greater than 95 percent. I volunteered to substitute in all classes and at all secondary schools so that my survey would be random throughout the district. My brief, anonymous questionnaire was given to 508 students at Granger High School, Brockbank Junior High, and West Lake Junior High School.

A Likert-type scale with response categories from "1," representing "No, I strongly don't believe the concept," to "5," meaning "Yes, I do strongly be-

lieve the concept," was used to measure beliefs. Response summaries to each of the ten questions of the survey are shown in TABLE I.

The most worrisome response by the Salt Lake children, in my opinion, is the belief of the students that Utah can accommodate the people being born there. It is heretical for Mormon religious leaders and teachers to advocate slowing the growth, and it is suicidal for politicians to do so. But the quality of life has slipped drastically in the past twenty years in Utah. The state has been exporting people since 1915. There were only a few years during the 1970s, during the energy boom in the Rocky Mountains, when more people came to Utah than left it. The Utah Office of Planning and Budget, in a study entitled *Utah Current Conditions 1984*, reports that two hundred thousand new jobs must be created in order to sustain the two million people who will live in Utah by 1992. This is more than *twice* as many jobs as have ever been created in the same amount of time in the history of the state. Utah's explosive population growth is straining the warp and weave of the society.

On December 4, 1984, I met with Donald LaFeurre and asked him if Saints are still expected by their leaders to believe that races of humankind have been cursed with dark skin. He said, "Yes, God's ways are not man's ways." I asked him if he foresaw any changes in these Mormon scriptures that were so unscientific and socially inappropriate in the twentieth century. He replied, "No," that the Saints must take these explanations by faith.

It is ironic, as the survey indicates, that even the knowledge of school children has progressed beyond the dogmatic explanation for human racial differences put forth by the prophet Smith. Yet, the grown men, the authorities of the church, must be true to Smith's revelations and say to members and the public that they believe the prophet's revelations.

It is interesting that 77.56 percent of the secondary students believe lit-



TABLE I

## WHAT I BELIEVE AND DON'T BELIEVE

("1" representing "strongly do not believe," through "5" representing "strongly do believe")

### 1. There are still miracles or supernatural happenings going on all the time, like in times of old.

1	2	3	4	5
10.10%	12.67%	25.15%	22.18%	29.90%
Total % 1 + 2 = 22.77%		Total % 4 + 5 = 52.08%		Mean % = 3.49

### 2. Earth was created in six days like it says in the Bible.

1	2	3	4	5
12.96%	6.09%	17.88%	11.98%	51.08%
Total % 1 + 2 = 19.05%		Total % 4 + 5 = 63.06%		Mean % = 3.86

### 3. There was a flood in the time of Noah, and Noah built a large boat or ark that enabled Earth's life to survive.

1	2	3	4	5
5.98%	5.60%	12.36%	18.53%	57.53%
Total % 1 + 2 = 11.58%		Total % 4 + 5 = 77.56%		Mean % = 4.16

### 4. Adam and Eve were the first humans on Earth. They lived in the Garden of Eden which was a perfect environment like the Bible says.

1	2	3	4	5
7.59%	7.39%	14.40%	13.42%	57.20%
Total % 1 + 2 = 14.98%		Total % 4 + 5 = 70.62%		Mean % = 4.06

### 5. Sin on Earth began with Adam and Eve breaking God's commandment to not eat the forbidden fruit.

1	2	3	4	5
10.41%	5.30%	18.27%	12.97%	40.67%
Total % 1 + 2 = 15.71%		Total % 4 + 5 = 53.64%		Mean % = 3.93

### 6. There is a devil on Earth, and he causes people to do bad things.

1	2	3	4	5
14.79%	9.72%	16.34%	12.45%	46.69%
Total % 1 + 2 = 24.51%		Total % 4 + 5 = 59.14%		Mean % = 3.67

### 7. God may sometimes cause curses on men and women when they become sinful.

1	2	3	4	5
39.73%	14.29%	24.27%	11.54%	10.18%
Total % 1 + 2 = 54.02%		Total % 4 + 5 = 21.72%		Mean % = 2.38

### 8. In ancient times, God cursed American Indians and blacks with dark skin. In time the curse may go away.

1	2	3	4	5
56.06%	9.82%	18.30%	7.71%	8.09%
Total % 1 + 2 = 65.88%		Total % 4 + 5 = 15.80%		Mean % = 2.02

### 9. I believe that humans evolved on this planet from lower forms of life.

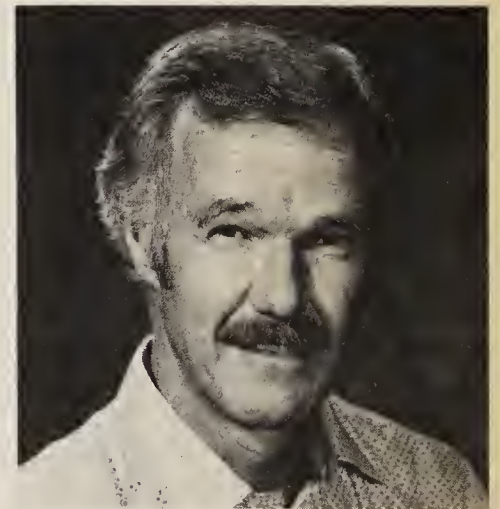
1	2	3	4	5
35.30%	10.65%	29.78%	7.50%	16.77%
Total % 1 + 2 = 45.95%		Total % 4 + 5 = 24.27%		Mean % = 2.60

### 10. I believe the idea of overpopulation in Utah is a bunch of bunk. Utah can provide for the people that are born here.

1	2	3	4	5
10.59%	8.24%	30.39%	19.22%	31.57%
Total % 1 + 2 = 18.83%		Total % 4 + 5 = 50.77%		Mean % = 3.53

erally in Noah's flood, and nearly that many, 70.62 percent, believe that Adam and Eve were the first humans and lived in the perfect environment of the Garden of Eden. There is social support for belief in these concepts among Mormons, whereas the teaching that dark skins originated from a curse by God is unacceptable, even among most Saints. Only the most orthodox Mormons cling to the idea that dark-skinned people are cursed.

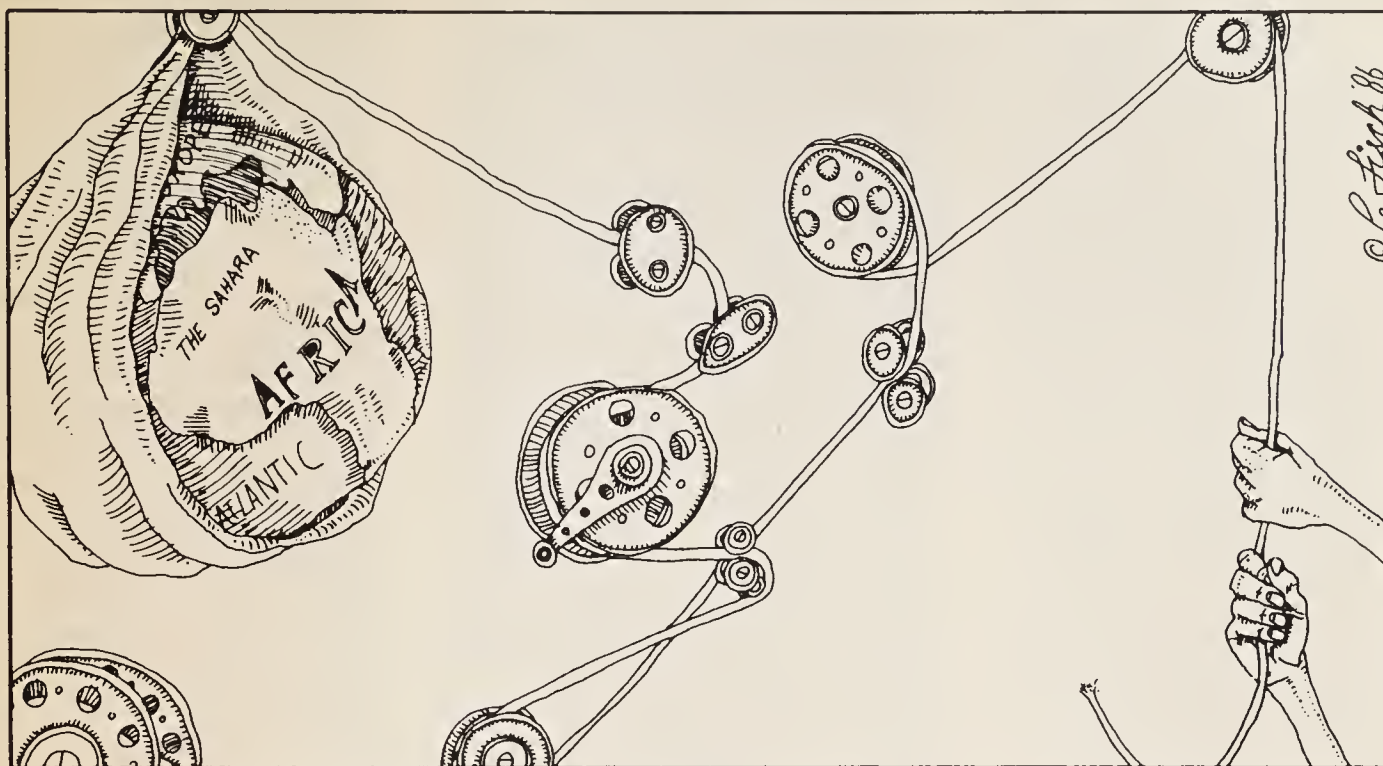
One such orthodox Mormon child surfaced as the questionnaire was being handed in by students at West Lake Junior High School. I was standing at the back of a geography class as students were handing their completed forms to me. Two eighth-grade boys, one white and one black, had just returned to their desks that adjoined one another in the same row. The little black boy whispered to the white boy, "What did you put on that one about curses on Indians and blacks?" In an embarrassed and almost apologetic voice, the little white boy answered, "I put they're cursed. But we believe someday the curse will go away." The little black boy shook his head.



Duane Keown is an associate professor of science education at the University of Wyoming in Laramie. He has just completed a book-length manuscript, "The Thirteenth Year in Zion," that offers a personal look at modern Mormon behavior as it is derived from the earlier teaching of the Church of Jesus Christ of Latter-day Saints.



One continent's problems could soon be those of the world.



# AFRICA AND THE LIMITS TO GROWTH

RICHARD U. LIGHT

**T**

he headlines keep driving the message home: "Road to Ruin: Across Africa Nations Are Sliding Backwards at Accelerating Speed"; "Continent Suffers from Lack of Food, Overpopulation"; "Nothing Like the Crisis in Africa Has Been Seen Since the Great Plague of the 14th Century"; "Twenty-nine Nations South of the Sahara Are Appealing for Emergency Food to Ward Off Famine." In its broader meaning, the message tells us that this imperiled continent is signalling the first large-scale test of the limits to which humankind can push the growth of its species. Can we go on expanding our numbers indefinitely or will we be stopped by the barriers that limit all other forms of animal life: starvation, disease, and violence? Will humans find ways to control their growth and adjust it to the carrying capacity of Earth, and will they do this in time to forestall disaster? These are ponderous questions indeed.

The dilemma is not new. Malthus sounded the alarm of overpopulation in 1798 and since then the threat has been floating around like a free balloon, sometimes dropping down toward Earth only to be lofted again for another brief flight by inventions or discoveries that gave new buoyancy to humankind's hopes. But now, with threatening finality, the balloon appears to have landed in Africa.

Africa's troubles grew out of two very recent events: European penetration of Africa and encyclopedic advances in the medical sciences. Black Africa—that vast sub-Saharan spread of tropical and subtropical lands which holds 80 percent of Africa's

people—was virtually unknown to Europe until the nineteenth century. True, the coastal fringes had been explored and settled by the Portuguese in the fifteenth and sixteenth centuries and the southern tip had become a haven for the Huguenots, but it remained for Livingstone, Speke, Stanley, and others in the nineteenth century to probe the interior and bring back the exciting news of its curious secrets, the lakes and rivers and mountains, the hidden wealth below the ground, and the strange assortment of creatures above. Stirred by these tales, a frenzy of European conquest broke out, so that between 1880 and 1912 every portion of Africa except Ethiopia and Liberia passed under the control or the protection of European powers. England dominated the eastern portion, France the northwestern, and Germany, Belgium, Portugal, Spain, and Italy held scattered but extensive holdings in other parts.

They chopped up the continent as carelessly as a cookie cutter might break apart a sheet of dough. Tribal units were severed, warring nations thrown together, and migrating peoples anchored in place. Neither rhyme nor reason prevailed. The English are said to have allowed the German kaiser to move a frontier so that he could own Kilimanjaro, Africa's highest mountain. The needs of the blacks were never considered, much less were they understood.

The modernization of Africa began soon afterward. Missionaries came to give the Africans a better god, administrators to impose rules and taxation, teachers to install schoolroom learning, and traders to tempt them with things they could buy. Finally came the medical missionaries, the modern kind like the Rockefeller Institute of Medical Research, which set out to eradicate disease and sanitize the continent. During this century of change, Africans were weaned from their tribal habits, clothed, cleansed, educated, and urbanized—at least to some degree. They married earlier, had more children, and lived longer, thus

creating the very essence of a population explosion.

Changes such as these start slowly and gather speed as they go along. During fifty years after Stanley's final march across the equatorial belt from sea to sea, black Africa slumbered peacefully. White settlers dwelt comfortably among the startled but friendly blacks, and the two races liked each other, trusted each other, and worked together in harmony, each one learning from the other. Some of the most appealing writings in English literature describe the joys and sorrows of this friendly mingling of the races as seen through the eyes of Elspeth Huxley and Beryl Markham, who grew up in Kenya, and Isak Dinesen (Karen Blixen), who came there as a bride. Their writings, which reached the public around 1940, have preserved for us that brief, delightful period in African history just before the grim realities of the European intrusion showed their gathering forces.

It was at this fortunate moment that my wife, Mary, and I undertook to make an aerial photographic survey of the eastern part of Africa for the American Geographical Society, focusing our camera on the twelve countries that cover the forty-five-hundred-mile stretch between the Cape of Good Hope and Cairo. During a period of two-and-one-half months in 1937 and 1938, we followed faithfully the society's objectives of photographing the essential variety of human existence in this fascinating continent—the farms and pastures, the adaptation to soil and climate and elevation, and the use and misuse of the land. The results were published in 1941 by the society in a book called *Focus on Africa*.

My brightest memories of these experiences of fifty years ago recall the pioneers who brought their European skills and habits into this strange land

and stayed to make them work. We met the original settlers, men and women in their sixties and seventies, who were eager to tell their stories and generous with their hospitality as they served us the ever-welcome tea and cakes whenever we called. They were always rather thrilled that soon after sunrise the next day their visitors would be back photographing their property from the air.

Working alongside them was another breed of pioneer, the scientist, and I remember the engineer who surveyed the Tanganyika Railroad in 1905 telling us how ground water determined where people lived. I remember his son, as well, the director of an experimental farm, who flew with us to show off his contour plowing to halt soil erosion, his catchment basins to conserve water, the rows of trees to break soil losses from the wind, and the clearings in the brush to halt the spread of the tse-tse fly. I remember warmly the government veterinary officer who ran a school in animal husbandry for natives and the delicious cream that he served to us, the meteorologist with his tiny home-made device for generating hydrogen to loft weather balloons, and another engineer who sat beside me in the copilot's seat as he proudly led us along the dips and turns of the road he had built around the Ruwenzori Mountains. And always, everywhere, were the blacks—hunters and laborers then but destined to become the future prime ministers, ambassadors, judges, and doctors sooner than anyone expected.

World War II and its aftermath stirred the blacks out of their quiet acceptance of white rule, the hushed reverence with which they had viewed this ingenious newcomer. Protestors appeared, then agitators, and soon afterward the colonial system began to disintegrate. In the face of rising nationalism, Europeans relinquished their hold almost as quickly as they had once grasped it. Between 1950 and 1965, most of the former colonies and protectorates were granted inde-



pendence by the European powers. Portugal held out the longest but finally relented in the 1970s. Not only did these newly made states gain relief from the yoke of Europe but they acquired a new importance in the United Nations where they soon controlled a third of the voting power in the General Assembly.

But with authority must come responsibility, and what a responsibility this has grown to be! From a continent of 160 million people in 1935, Africa grew to 560 million in 1985—an increase of three-and-one-half times in just fifty years. These swelling millions of hungry people are destroying the animals to get at the land, then they are destroying the land itself as the forests and savannahs are cut for fuel, pastures are overgrazed, and soil is overplowed. Africa is the only region of the world where food production is losing the race with population. We are back to the headlines. Worse, much worse, lies just ahead, for the rate of growth is itself increasing. In Africa in 1985, the birth rate was forty-seven per thousand and the death rate was seventeen per thousand. The resulting annual growth rate is 3 percent, a rate that will cause the African population to double in twenty-four years. Unless growth is arrested, Africa's population will crest one billion only twenty-four years from now.

**I** must pause here to explain the curious term *exponential growth*, which is familiar to bankers as compound interest. Most of us are accustomed to thinking of growth as a linear process in which something we treasure increases by a constant amount, such as a child who becomes one inch taller each year. But a quantity exhibits exponential growth when it increases by a constant percentage of the whole, and this type of growth is a common process in biological, finan-

cial, and many other systems. Common as it is, however, exponential growth can surprise you in a way that can be demonstrated on your own fingers: take the number one and double it to two, then double two to four, four to eight, eight to sixteen, and so on, and count each time you double on your fingers. By the time you have reached the tenth doubling, the beginning number has become one thousand (plus a little more which we may forget here). Now, continue the doubling from one thousand upward. At the twentieth doubling, you will reach one million, and by the thirtieth you will be up to one billion. Our present world population passed four billion in 1975 and is now in its thirty-third doubling.

Growth by doubling is deceiving in another way. The halfway point in any doubling series is not back somewhere in the series but right up front; it is the number just before the last doubling. The halfway point in the growth of world population occurred around 1930 when it reached two billion people.

Throughout the long history of humankind, the dominating force that kept human fertility from crowding the planet was disease, the invisible killer that attacked all ages, all races, and nearly all of the regions of the world. Disease effectively limited life expectancy to twenty-five years or less. Smaller forces came and went—wars or famines to depress the numbers, biological immunities to raise them—but these left only tiny dents in the long, slow expansion of the human race. Life under the constant presence of death demanded large numbers of

children to ensure survival, a feature that intrigues and often frustrates modern genealogists.

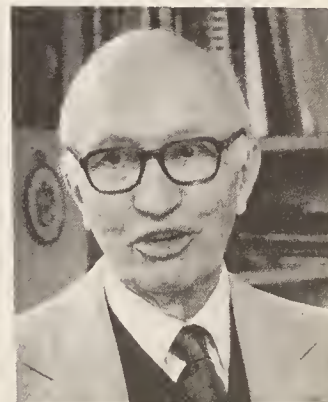
This steady state of affairs came to an end when bacteria were discovered and laboratory research took root. As these workshops proliferated and as the handful of Pasteur-trained investigators sprinkled seed to produce thousands of followers, the perimeter of human medical knowledge enlarged with gathering speed, just as population does. Of all of the scientific advances that have occurred during my lifetime, none has had greater immediate impact upon humanity than the conquest of infectious diseases, which can now be considered as part of "time past" when measured on the scale of human longevity. Life expectancy has been raised in the developed countries to seventy-four years, coming very close to the natural limit of the human species. While research and discovery still go on, the great scourges are behind us and premature death as a controlling force over population growth has finally been removed.

What, then, is left to take its place? Birth control, and nothing else. The equation demands this, for population is simply the difference between the birth rate and the death rate. Without effective control of the numbers born, we soon lose our grip on the numbers dying.

Preventive measures are helpful, and recent advances in contraception command our attention, but the proportion of unintended pregnancies still remains uncomfortably high—the figure is around 50 percent for the

CONTINUED ON PAGE 38

*Dr. Richard Light, now eighty-four, has pursued careers in both medicine and geography. During the 1930s he circled the globe with a seaplane, then turned his attention to the continent of Africa. Today, he analyzes the changes that have occurred since the aerial survey made with his wife in 1937 and projects the future. Dr. Light is a member of the Association of American Geographers and a past president of the American Geographical Society.*





# LEARN THE WHOLE STORY!

## "Scientific" creationists are abandoning the Paluxy River footprints. Here's why:

The latest issue of *Creation/Evolution*, the only journal devoted to answering the arguments of "scientific" creationists, tells the exciting story of how leading creationists finally were made to realize that some of their conclusions were in error.

Until recently, creationists had claimed that human and dinosaur footprints could be found side by side along the Paluxy River in Texas. But in the light of a devastating analysis of the evidence by AHA-financed researchers, published this past summer in *Creation/Evolution*, and extensive work done by independent researcher Glen Kuban, leading creationists took a second look at their own evidence and began to retract some of their claims.

In this latest issue of *Creation/Evolution* (number 17), Glen Kuban explains the facts that convinced creationists they were wrong. Dr. Ronnie Hastings tells how the change of heart came about. And Robert Schadewald shows how much more retracting the creationists have yet to do!

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## REPRODUCTIVE RIGHTS

CONTINUED FROM PAGE 7

vented that, and no violations have ever been found. The answer, instead, has to do with appeasing the radical extremists who callously ignore Americans' fundamental rights and the world's fundamental needs.

**T**hat callousness is most obvious in the domestic abortion controversy. The extremists' long-term goal is to ban abortion nationwide. But they fail—time and again—in the courts, in Congress, and—most importantly—in the hearts and minds of the people. In their frustration, however, extremists have resorted to scare tactics designed to frighten us into surrendering our civil rights and our constitutional right to privacy.

The terrorism we see overseas is

matched by terrorism right here at home. Since January 1985, family planning and abortion clinics have been subjected to more than twenty-five incidents of actual or attempted bombings and arson. And they have escalated to the level of direct attempts to commit murder. Yet President Reagan, the man who swore to uphold the Constitution of the United States, is reported to have discussed pardons for abortion clinic bombers.

Clearly, the flames of fanaticism have not been extinguished in this country. One man who helped bomb three clinics on Christmas day in 1984 said that his actions were "a gift to baby Jesus on his birthday." Clinic violence and harassment are the direct descendants of the religious discrimination that once was as common as powdered wigs in Colonial America.

We have come too far to return to those days. It is true that tolerance taxes our patience and strains our sense of fairness. But, accommodating differences was never meant to be easy. Those who think it's too diffi-


cult, those who think the rest of us should be protected from ourselves, be comforted by the words of Thomas Jefferson:

I know of no safe repository of the ultimate powers of society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them but to inform their discretion by education.

We must trust the people. We must trust each other. We must recognize that private morality should be taught in the home and preached from the pulpit, but it must *never* be legislated by politicians. We must protect our own basic rights by protecting those of others. Most importantly, we must never be so convinced of the rightness of our position that we blind ourselves to the possibility that the realm of truth may lie in another person's vision.

The legendary jurist Learned Hand, in the dark days of World War II, made an observation that will hold true until the end of time. He said, "The spirit of liberty is the spirit that's not too sure it's right."

With such a philosophy, we can preserve the principles of justice, pluralism, and democracy that are cherished by so many millions on planet Earth. We can continue our heroic journey toward full freedom of thought and expression for all. And we can look forward to the day when tolerance, reason, and justice will be the bedrock of our churches, our courts, and our Congress.

In 1957, when Margaret Sanger received her Humanist of the Year Award, she said that reproductive rights "should be the humanist spearhead in the endless battle against entrenched complacency, against mass conformity, against the glacierlike menace of prejudice." Today, in 1986, I do not ask that you adopt reproductive rights as your spearhead. I ask only that you help preserve those rights in your continuing struggle to preserve the humanity of our world. 



Mary Morain

## A Worldwide Challenge

**I**n recent months, our U.S. National Security Council has called for reports on population data from our embassies in seventy-seven countries. The council has received straight talk for the resulting summarization of the situation:

A majority of our embassies in Africa and some in Latin America report large pockets of declining agricultural productivity due to widespread slash-and-burn farming, unawareness of the economic facts of life including wishful thinking that economic development will automatically resolve the population problem. . . . The cause is population pressure.

It is our own country among developed nations which is now most guilty of encouraging this blind reliance upon "economic development." The final statement from this summarization has an awesome ring: "It will take the commitment of millions of dedicated people if mankind is to be spared disaster."

During the first part of this century, research and foundation funds were poured into death control. Death has few friends except among the very sick and the very old. Its control is in harmony with the deepest of human instincts and has the widest cultural acceptance. Support for death control can be cheerfully given to foundations and public health departments.

The only civilized balancing force, conception control, is very different. Instinct gives little help here but is, rather, a clever antagonist. Our human moral and cultural beliefs promote rejoicing in new life. Here each recipient of conception control must make a conscious choice—in some situations, a courageous choice—and each purveyor must use sensitivity and patience. It is true that in meeting the population challenge we do need the commitment of millions.

The enormity of the challenge is well known to the developed world. By the year 2000, at present growth rates, there will be an increase of 1.3 billion in global population, for a total of 6 billion. Of great importance is this: 92 percent of this fearsome expected increase will come from the underdeveloped nations.

There are increasing indications that among all groups and in many geographic areas commitment is

growing. To further this, to publicize such signs, and to encourage readers to do the same is one of the major purposes of this column.

There is a basic spur to action in the knowledge that an estimated 400 million couples who consciously want help in family planning either do not know where to turn or feel that they do not have the means to get such help. Studies also show that most couples within the underdeveloped world wish to have fewer children than the current average number among families in their societies, and mothers are realizing that babies have a far greater chance of living through the perils of infancy if there is a two-year space between them.

**M**eanwhile, even most male rulers are waking up to the transcendence of the population problem.

**Kenya:** President Moi of Kenya, in a radio address marking 1985 as the twenty-second anniversary of Kenyan independence, said, "The most crucial challenge for us in this decade is slowing down the country's population growth." He pointed out to his people that, even if the Kenyan economy grew at 7 percent annually for twenty-five years, population growth would cancel most of the projected gains for the average person.

**Egypt:** After years of trying to reduce population growth by such schemes as giving women pigeon hutches and sewing machines so that they would think of themselves as more than "baby factories," the Egyptian government is realizing that it must be more direct. An Egyptian fertility study showed that some 50 percent of husbands and wives interviewed agreed that they *did not want* any more births. President Hosni Mubarak is ready to make a variety of contraceptives widely available. At a conference he convened in the spring of 1984, he said that unless a realistic national family planning program were put in place the country would be plagued with "famine, unemployment, and terrorism." A new National Population Council has been established, and Egypt hopes by the year 2000 to have a population of between 62 and 63 million rather than the 70 million projected if current growth rates continue. Wide use of radio and television is planned, as some 60 percent of Egyptian women cannot read.



**Brazil:** Faced with a doubling of its population in thirty years, Brazil will be offering family planning through the Brazil Social Welfare Organization, which serves employed citizens. According to the minister of social welfare, "Family planning is a right of each human person." Many Brazilians not served by this program will get help from the Brazilian affiliate of the International Planned Parenthood Federation through its seventy-eight clinics, 2,141 "health posts," and other channels.

**Mexico:** The National Population Council of Mexico has won the 1986 United Nations Population Award. Since its establishment in 1974, the council, which is made up of the ministers of various key government departments, has labored to integrate demographic planning with other development programs. Mexico's

birth rate has declined from a rate of 3.5 percent to 2.1 percent since 1974.

For some updates, warm thanks are due to *Popline*, a monthly news service of the Population Institute. H

*Mary Morain has been an officer of the Association for Surgical Contraception and on the board of directors of the International Planned Parenthood Federation—Western Hemisphere Division. Coauthor of Humanism as the Next Step, she has edited several general semantics volumes.*



## BIOTECHNOLOGY

CONTINUED FROM PAGE 9

Eventually, our new knowledge of the precise workings of the brain may make any other hypotheses quite superfluous. This is likely to produce an even greater cultural shock than Darwin's suggestion that we have

evolved from apelike ancestors.

All this new knowledge will allow us to tackle in a serious manner just what went on in evolution, though the lack of any detailed historical record will certainly make this task more difficult.

In short, these new developments will allow us to acquire almost un-

limited information about the biological nature of humanity. Knowledge brings power, and power brings both benefits and risks. There is little doubt that by these discoveries society will be transformed before the end of the next century. Many of the issues disturbing humanists today may then appear rather trivial.

It should be realized that, for much of our evolution as human beings, our ancestors were hunter-gatherers. Many of our ways of thinking, including the obvious human desire for a religion of some sort, were evolved to help us survive during this period. Humankind did not evolve in order to cope with a scientific view of the world, since that is far too recent. True science is very rare, and many high civilizations, such as the Chinese, never took the decisive step needed to get science going, although they often showed many prescientific activities.

We must face the fact that scientific knowledge has led us into ways of thinking which are only partly in harmony with our genetic heritage. Are we prepared to face up to this very difficult problem? Even for a humanist, it is not easy to think of oneself as a neuronal machine. Most of the people alive today would find it impossible to do so. And that, I think, is the final thought I would like to leave with you. H

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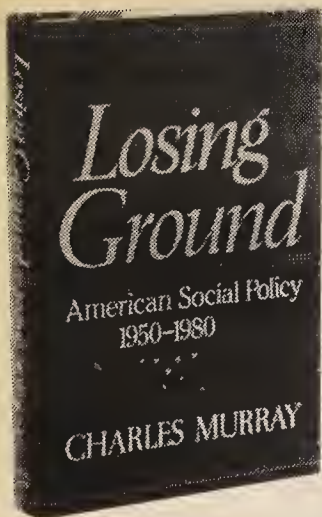
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## IRRATIONAL ETHICS

CONTINUED FROM PAGE 20

Each person will draw this circle a little differently, depending upon his or her innate empathic ability and his or her culture's manipulation of that ability. Most social and ethical conflicts are actually disputes over where the limits of the empathic circle should be drawn. Should an unborn child be considered of the same empathic value as a human being? Should members of a different race be given the same privileges as our own? Should members of a different culture be trusted? Should the children of atheists be taught to pray in schools? Should you tell the truth to all individuals at all times, even if grave harm may result (as when a murderer asks for the whereabouts of his victim)? Should an individual suffering from terminal cancer be told of his or her condition?

It is by understanding the concept

of the empathic circle that we can make sense out of human moral and ethical dilemmas. Far more important than the question of what our moral or ethical systems should be is the question of to whom they should apply and under what circumstances. And far more interesting than the question of how we justify our moral and ethical systems is the question of why we feel they must be justified.

### CONCLUSION

Reason can inform our ethical choices, but it cannot make them for us. Empathy binds us to our moral and ethical systems and gives us the power to make ethical choices, but it is an easily manipulated, blind emotional response. Moral systems have never been complete, consistent, or absolute, because they have been based

upon the trait of empathy alone. Rational ethical systems can be consistent, but can never be complete or universalized, because undecidable ethical propositions have always been and must always be decided by the empathic response. Every code of conduct that humankind has developed has been incomplete and arbitrary.

Yet, this is a tragic situation only if we remain unaware of this fact. If we come to realize that our choices are based upon incomplete understanding, we will be less likely to assume we are absolutely right. If we realize empathy is blind unless it is informed by reason, we can learn rational thinking. If we realize that reason is crippled without empathy, we can learn to combine the two into compassionate action. Then, and only then, will both reason and the empathic impulse be best served, and our empathic circle will become an ethical one.



# FROM COPPERHEAD CLIFF

Lester Mondale

## The Enduring Humanism of Confucius

*The following excerpts are reprinted from chapter two, "The Enduring Humanism of Confucius," of Lester Mondale's Values in World Religions, published by Starr King Press in 1958.*

About thirty-five years ago there began to appear in liberal pulpits and on college faculties of this country persons who called themselves humanists—John Dietrich, Curtis Reese, Eustace Haydon, Max Otto, Roy Wood Sellars, John Dewey. These persons were humanists, they insisted, not theists. Their loyalty was to humankind and not to the God of Christianity or Judaism. Their concern was with this life and with the natural, not with some future life and the supernatural. Their authority was science and philosophy and human experience, and not some book of revelation.

In these thirty-five years, humanists have been called everything from atheists and free lovers to communists. It is the humanist that the orthodox Christian and Jew have in mind in particular when they shout denunciations of that horrendous threat to democracy and religion and home and family they call *secularism*. It is the alleged decadence of humanism from which Congress and the president have been trying to protect us, by way of legislation that puts God on postage stamps and into the oath of allegiance. Humanism, theologians confidently assure us, is a superficial rationalism, a philosophy that stands up only as long as the weather is fair and the sailing is smooth—nothing for a blizzard or years of drought or hurricane devastations.

No one could have been more the humanist than Confucius—respector of the religious beliefs of others, respecter also of the *way* of heaven—but at the same time one who, when asked about the worship of celestial and earthly spirits and about death, had to answer in all honesty: "We don't know yet how to serve men; how can we know about serving the spirits? We don't know yet about life; how can we know about death?" First for him was humankind and first among his concerns for humankind was this life. For twenty-five hundred years, some hundred generations, this humanism has ministered to the daily needs of countless Chinese in fair weather and foul. . . .

For all of his quaint peculiarities and tastes, Con-

fucius was a man who could weep for his friend, smile and laugh and really care for people. About himself he said:

I am a man who pursues the truth untiringly, and teaches people unceasingly, and who forgets to eat when he is enthusiastic about something, and forgets all his worries when he is happy or elated, and who is not aware that old age is coming on. . . .

The times to which Confucius addressed his life are so markedly similar to the world of today that the needs to which he ministered twenty-five hundred years ago are also very much the needs of the present hour. If, by some miracle of supernatural religion or clever device of science fiction, old Confucius could be resurrected and could scan the headlines we have been reading in recent years, he would shake his head and smile and comment: "How familiar!" He'd feel quite at home amid the international anarchy and the struggle-to-exist turmoil of today! Treaties are still observed as they were in his time when, as one ruler frankly put it, a compact was something one lived up to until circumstances gave him the advantage over the other fellow. His was a world dominated by military force. One survived by an all's-fair-in-war cunning, corruption, and brutality. . . .

Confucius's desire to place simple honesty and truth first in all relations with his fellow humans came out of his discovery of a new and more satisfying relationship between people—a quality of living that was infinitely more satisfying than dealing with people only for what one can get out of them, for what power or advantage one can get over them, for what prestige or sensual gratification they might afford one.

We come upon this more satisfying relationship in the account of his striking out (when he was fifty years old—his hope for service in his home kingdom of Lu abandoned) in search of a neighboring king or duke who might take him on as chief minister of state. More than one of Confucius's followers had been employed in government. As the decades went on, more and more of these trustworthy men were taken on—until China became blessed with a new peace and order. But for Confucius, on the verge of becoming an old man, his was a hopeless mission. Year followed year of fruitless wanderings and dangerous encounters. With him was always a goodly handful of his student-disciples, sons of aristocracy, sons of peasants with



only dried meat to pay for their instruction. He took them all, the only provision being that they had to be able to think for themselves and be dedicated to the cause of a better lot for their fellow humans.

The relationships he struck up with these followers and in whatever village or city or court he visited were expressed by a symbol he had painted on a shingle and placed on his tent. It was the symbol for the word *Shu*. This word or character means: "My heart's desire is to meet your heart's desire," or, "My

heart responds to yours." Not do unto others as you would have them do unto you, but *feel* toward others as you would have them *feel* toward you. . . .

*Lester Mondale, the youngest signer of Humanist Manifesto I in 1933, has published widely on humanism and Unitarianism, including Values in World Religions and Preachers in Purgatory. When not busy with chores at his Ozark farm, he devotes his time to writing and study. He is currently editing a collection of his essays for publication.*

## SURVIVAL?

CONTINUED FROM PAGE 14

Most Americans do not know this. I would say that a majority of people will admit that they *did not know* that the Soviets have not, in fact, tested for nearly nine months. They haven't learned it from their newspapers. Thus, they have hardly put any pressure on the president to change the situation they don't even know exists: that we are testing and they are not. That's the purpose of that secrecy. By the way, it's not a case of the knowledge being classified; it's self-secrecy by the American people, by the American media.

If I mentioned that I was terribly distraught, desperate, and depressed this past fall, it was because of the performance of the media in regard to this matter. There were stories that the Soviets were not testing—but you had to look at the news as obsessively as I do to find them. You had to read the final paragraph of long stories, and you had to look at little bits here and there. I well understood that the American people were not learning this information from our media, even though it wasn't classified. We do, however, face the choice. The American people will not know it unless some steps are taken to get through that media silence and to make them aware that they have that democratic choice.

I learned two days ago, on April 4, that the United States is planning a test for this coming Tuesday, apparently in order to confront Dobrynin—on his first discussion with Reagan

since returning from Moscow to discuss a summit conference—with a fait accompli, "We tested this morning."

A few protesters at the test site will not stop the test. Only you can do that. And you can't do it alone. The American people have to do that and can do that. And that is what they must do. They won't stop this test, but they must stop the testing before the Soviet offer goes away, for one or another reason. My experience tells me that the American people can respond to the issue and the example of people who are taking the effort out of the ordinary by disrupting their lives, disrupting their habits, defying authority, defying the religion of the state, and refusing to say that the president's policy has a kind of divine fiat to it.

There are other Americans who are saying, "We want to test the Soviets, not nuclear weapons. We want to test Soviet willingness to end the arms race, which they've shown over the past nine months. We want to find out if that is true, not avoid finding that out. We do not give our consent to this test. It doesn't have our permission. You'll have to test this weapon under our bodies, in this case."

You will all have your chance to send a message to Congress and to the president and to the world as to what you think of the continuation of this process. I think we *do* have a chance. That's what our humanity gives us. We do have a chance to change these human policies, to change more radically than we ever have in the past two thousand years, to change more

radically than any revolutionary regime has ever changed so far. Without change that fundamental, I do not believe we will escape the fate for which we have been preparing for so long.

But we *do* have that chance to change. I know that. My life tells me that people can change and change by the example of other humans and by reflection. I felt the power of nonviolent civil disobedience on my own life and that's why I believe it works. I believe it has consequences and that's why I still do it. And I hope that many more people will find ingenious, rational, and deeply compassionate ways to act on their humanity and to protect this earth for our children.

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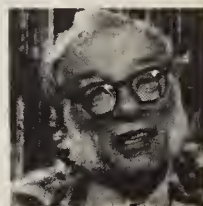
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# FEMINIST UPDATE

Cleo Kocol

## Puget Soundings

The largest ferry system in the United States operates in Puget Sound. Going to and from the Olympic Peninsula, Bainbridge Island, and among the San Juan Islands, ferries make possible a traditional way of life. People can live apart from the bustle of the city and still commute to jobs and cultural events in Seattle. Recently, one of those ferries, *Hyak*, ran aground and passengers were rescued by tugboats and other vessels.

When I heard about the problem, I wondered about the mechanics of leaving the ship. Discounting differences in health, age, and inclination, was it women and children first? In 1912, when the ocean liner *Titanic* ran afoul of an iceberg, men were the last to board the lifeboats. At that time, women were considered the weaker sex who needed to be taken care of. Presumably, men were better equipped to deal with cold waves and cruel seas. After all, they handled the hurly-burly of everyday life. Thus, both sexes were locked into a no-win situation by chauvinistic thinking as shown in the following paragraphs.

Such thinking was still prevalent in 1956. When the Italian liner *Andrea Doria* and the Swedish ship *Stockholm* collided in the fog and the *Doria* sank, harsh words were reserved for the men who tried to "jump the line" and secure a lifeboat seat early. Would it be the same today and, if so, why? What makes the life of one sex more important than that of the other?

Most people would agree that children are the future and would see nothing wrong in giving them a seat in the boat first. So that leaves us with a second seat choice. Does it go to women because this has been the way it always has been done? By following this routine, we keep faith with a system that has systematically locked people into sex roles. Or should men go next in order to make up for going down with the ship in the past?

Humanistically, there can be only one choice: equal access by men and women to all seats in the lifeboat. Concrete examples of this type of thinking are seen on other forms of public transportation. Women stand on crowded buses as often as men. Both sexes give up seats to obviously pregnant women, the elderly, and the handicapped. In the nine-to-five world, there is no time for old-style manners. Pragmatism and real caring for the feelings of others are the keys. If you get to a door first, you open it. It's as simple as that. The old

lifeboat pattern of thinking is dead. Or is it?

An example of twisted logic is the way most bosses honor secretaries on special occasions—lunches or dinners on Secretaries' Day, flowers or theater tickets on birthdays, and parties and impartial kisses during the December holiday season. Most secretaries would forego all of the former for salaries commensurate with their duties and abilities. Yet, even a cursory reading of newspapers during the past two years would show a concerted effort to defeat equity in the marketplace. Take, for example, the May/June 1986 issue of *The Humanist*. Forgetting the ramblings of Phyllis Schlafly, most of the writers who claimed that comparable worth is unworkable were men defending their turf. Yet, as proponents of comparable worth point out, comparing jobs as diverse as garbage truck drivers and practical nurses is possible and has always been done. No one argues that the *Dictionary of Occupational Titles (DOT)*—which has long been used not only by the federal government but also by private industry—is invalid. Is that because in the *DOT* women's jobs have been given a lower value than men's?


If people left a sinking ship according to their position in the *DOT*, men would have redress for the drownings of the past. But being first in the boats is a high price to pay, as women have long known. In female job ghettos, they go down with the ship daily, and many times their children are with them. It would appear that there are no valid arguments for either men or women to be first in a boat that maintains a custom which gives only an illusion of equality.

Recently, Kathryn Black, associate professor of psychological sciences at Purdue University, and Michael R. Stevenson of Ball State University, along with Diane Villock, a graduate student, conducted research into student perceptions of the words *masculine* and *feminine*. The results were illuminating. Fifteen years ago most respondents would have used personality or behavioral traits to differentiate between the two words. Although a large percentage still did use these traits, more students chose physical makeup to describe the differences. So, progress is being made.

Yet, true equality means change. To embrace it, women and men must be ready to take their turns and have equal access to both ships and sea, to drowning and being first in the lifeboats. When the polarization of masculine and feminine—of societal, not biological—impositions ends and true humanist thinking prevails, everyone will benefit.

Does that mean, then, that chivalry and heroism



have no place? No, there is always room for individual choice. But it does mean that neither men nor women will be locked into sex roles. Happily, when the ferry *Hyak* ran aground in Puget Sound, true equality existed. The first off the ship was a woman suffering an asthma attack and a man with an injured leg. Subsequent evacuation did not follow the traditional unwritten rules of the sea. The Coast Guard advised me, however, that in a dire emergency, a race against time, the old custom of the sea would prevail. It would be women and children first. 

Cleo Kocol is a member of the board of directors of the AHA and chairperson of the AHA Feminist Caucus. She is a writer, an actor, and a humanist activist. Professionally, she performs her monodramas nationwide.



## AFRICA AND GROWTH

CONTINUED FROM PAGE 29

United States, even though contraceptives are freely available and widely used—leaving us no alternative but to use abortion in the control of growth. Half of these accidental pregnancies are accepted and carried to term, and the other half, 25 percent of all U.S. pregnancies, are aborted. Abortion is an important element in population control in virtually all of the developed countries of the world. The implied need for its use in the less favored societies is beyond question.

Intensive research is underway to improve our methods of birth control. In the advanced stage of testing are injectable pellets that can suppress fertility up to five years and an abortion agent that can be self-administered in the home at the first sign of pregnancy. Humankind's endeavors to achieve a stable population focus upon innovative approaches such as these.

When the annals of the medical history of this century are written, the steps by which the devastating power of human reproduction has been tamed must surely rank high on the long list of our achievements, for birth control now holds the key to sustained existence on a fully inhabited Earth.

The crisis in Africa suggests that there are limits to growth that apply not only to Africa but to the world as a whole. In broad terms, this must be true since no species of life—and there may be ten million of these on Earth—has ever been able to expand its num-


bers to the exclusion of the others.

In 1968, a small group of international thinkers banded together under the intriguing title of the Club of Rome to give shape and dimension to what they called the "Predicament of Mankind." Four years later, they published *The Limits to Growth*, in which computers calculated the exhaustion times of many of the nonrenewable resources. Here we find that iron will run out in 173 years, coal in 150, petroleum in fifty, and copper in forty-eight, and so on—all finite figures. Nine years after that heady news, there came an exactly opposite view from the economist Julian Simon, whose book *The Ultimate Resource* ridiculed the thought that there are any limits to human expansion and championed the happy arrival of more and more people.

Both positions seem faulted. The rigid limits of the computer cannot program our ability to solve hard problems, while Professor Simon's assumption that the additional brainpower of additional people will solve all of the additional problems forgets that results do not spring full-blown from the brain out onto the running track but need time for testing and development, and that time is linear and moves slowly while population races ahead with logarithmic speed.

Yet, both viewpoints deserve thoughtful consideration. There are limits to Earth's resources even though we cannot predict them, and human ingenuity is remarkable, although it cannot be rushed. The real

limit to growth, then, appears to be time rather than substance, and to gain the necessary interval of time we must hold the birth rate within supportable limits until we find the ways to increase those limits. Life thus becomes a see-saw between low death rates made sustainable by low birth rates and high death rates made inevitable by high birth rates. In the world of today, we see both examples at work: the developed nations have held onto their achievement of longevity by voluntary control of childbearing, while the African nations have come part way into the modern world without the incentive or the equipment to restrain the birth rate.

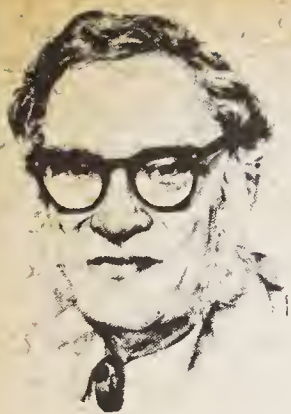
Africa cries for help. Food is on the way, but it is vastly more important that we send teachers and technology and money—and endless amounts of encouragement—to help Africa halt its suicidal growth in numbers. With growth halted and the numbers reduced, the African people can go about the slow rebuilding of their damaged forests and pastures and soils and return to a balance between earth and people. Without that help, Africa, the second largest land mass on Earth, seems to be headed toward a continental graveyard. 

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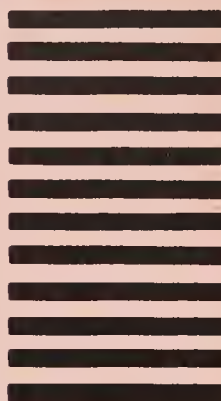


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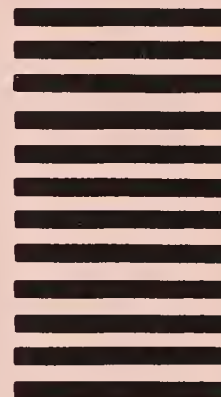


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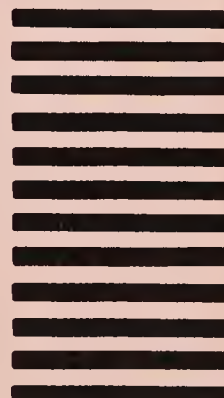


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To welcome new members to the AHA, each will receive Corliss Lamont's **The Philosophy of Humanism**, the definitive book on the history and progress of humanism and the humanist movement.

## The Scope of the AHA

**Publications, Television, Radio:** The AHA publishes **The Humanist**, **Free Mind**, and **Creation/Evolution** in addition to numerous pamphlets and brochures. The Humanist Press is the AHA's book publishing arm. The AHA has produced two color television series, "The Humanist Alternative" and "Ethics in America" as well as **Humanism: Making Bigger Circles**, a forty-five-minute film, narrated by Isaac Asimov and featuring many renowned humanists. The film defines humanism and relates it to the pressing issues of our time.

**Speakers Bureau:** Leading humanist spokespersons are made available to local groups, colleges, and universities for lectures on humanism and humanist concerns.

**Division of Humanist Counseling:** Certified counselors are provided for humanistic marriage and memorial services as well as personal counseling.

**National and International Affiliations:** The AHA is affiliated with PEARL, RCAR, and UNA-USA, is a member of the IHEU, and is a Non-Governmental Organization of the United Nations.



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## PHILOSOPHER'S COLUMN

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Konstantin Kolenda

### Common Causes

In the realm of human choices, wholesale judgments are perilous. A generalized hostility to organized religion, for instance, may blind us to important insights and arguments. A case in point is the recent declaration by the United Methodist bishops. It would be a mistake to close one's mind to that declaration just because it comes from those who happen to hold religious beliefs. The source of an idea can be distinguished from its content, and one may find the idea sound on its own merits, regardless of its origin. When an idea articulates a common concern, a concern not limited to a particular body of doctrinal beliefs, it deserves encouragement and support.

What is thought-provoking about the bishops' letter is its bold attack on the policy of nuclear deterrence, which has now become almost conventional wisdom. "Nuclear deterrence has too long been revered as the idol of national security. In its most idolatrous forms it has blinded its proponents to the many-sided requirements of genuine security. There can be no unilateral security in the nuclear age."

In place of the morally dubious doctrine of nuclear deterrence, the bishops propose an *ethic of reciprocity*, which calls for the elimination of the lingering possession of nuclear weapons by joint action of superpowers in agreed stages. This change of approach is necessary because nuclear deterrence has in fact become a dogmatic license for perpetual hostility. To break out of the vicious circle of that hostility, the wielders of our world's awesome nuclear weapons must make an effort to convince themselves and others that the common security of the world cannot be attained by relying upon the constant and relentless

threat of mutual annihilation.

As the British philosopher Anthony Kenny argues in his book, *The Logic of Deterrence*, that threat is itself immoral. He finds that the immorality of deterrence is implied even in President Reagan's defense of his Star Wars initiative in the January 1985 Geneva communique: "Isn't it worth researching to see if there isn't some weapon that is more humane and moral than saying that the only defense we have in the nuclear age is that if they kill tens of millions of our people we'll kill tens of millions of theirs?" Instead of the dubious "leak-proof umbrella," however, Kenny proposes a renunciation of the actual use of nuclear weapons and a responsible program of mutual disarmament.

Another vivid proof of the need to focus upon common values in spite of doctrinal differences came to most of the world in the shape of radioactive clouds from the Chernobyl nuclear power plant. That accident, like the *Challenger* disaster, was primarily a human tragedy, and it was disheartening to see it distorted by ideological posturing on the part of Soviet authorities. By failing to share information about the accident, the Soviets have caused serious and legitimate anxiety among their neighbors in Europe, not to speak of their own population. The safety of nuclear power plants is of great concern to all nations that have them or can be affected by their malfunctioning. Radioactivity respects no national or ideological boundaries and reminds us that all governments have a moral obligation not to jeopardize the greatest common value of all inhabitants of Earth: life and health.

The lesson of Chernobyl applies all over the world. It is forcing all users of nuclear power plants to reexamine their safety precautions. Not surpris-

ingly, the greatest plunge on the Dow Jones Index in recent months has been attributed to that accident. World-wide attention to nuclear safety is a good thing, because it eloquently underscores the dangers inherent in a careless handling of nuclear power—whether for military or peaceful uses. It also makes clear that there are common causes which should prompt those in power, on whatever side of ideological divides, to work toward constructing bridges of mutual understanding and trust.

No matter how discouraging the record of the past may be, the mark of leadership is the ability to coax out of the future its positive possibilities. To treat an ideology, even a national character, as if it were an inexorable law of nature is to fall into the trap of historical or sociobiological determinism. Leopards can't change their spots, but human beings do change their minds. At times, that change may consist of perceiving the need to abandon the appeal of a wholesale ideology for the sake of a common human cause.



Konstantin Kolenda is McManis Professor of Philosophy at Rice University in Houston, Texas. Besides many publications in his field, he has published extensively on humanist topics and has served on the AHA board of directors.





## BOOK REVIEWS

**Philosophy's Journey: A Historical Introduction** by Konstantin Kolenda (Prospect Heights, IL: Waveland Press, 1986), 372 pp., \$12.95.

Never have I read a historical survey of philosophy that comes so near to having a philosopher in your own living room, serving as your own guide to the territory. And what a remarkable guest Professor Kolenda is: knowledgeable, wise, patient, considerate, and, above all, infectious in his deep love of the tradition of Western thought. *Philosophy's Journey: A Historical Introduction* is organized into three sections: ancient philosophy, modern philosophy, and contemporary philosophy (medieval is included as a preface to modern). Each section is followed by a critical summary and a list of suggested readings. Thus, the reader is put in touch with the entire history of Western thought and can then choose among the various philosophers and philosophical problems for closer acquaintance.

Please note that this is not the usual edited collection of snippets from the works of the great philosophers—it is Professor Kolenda throughout. One advantage of Professor Kolenda's writing is that he achieves lucidity with materials that in some cases are murky in the original. Another is that he enables us to see a philosopher's thought as a whole rather than in fragments. Still another is the emphasis the author is able to give to philosophy's concrete contribution to the enduring problems of ordinary life, as distinguished from highly abstract "philosopher's problems" that occur to no one else. Adults who wish to better acquaint themselves with their cultural heritage will be glad of Professor Kolenda's fireside company.

—reviewed by David L. Norton

**The Black Power Imperative** by Theodore Cross (New York: Faulkner Books, 1986), third edition, 842 pp., \$19.95 cloth, \$14.95 paper.

This tome is a veritable gold mine of facts, statistics, and ideas. It should have a prominent position on the reference shelf of the Congressional Black Caucus and be read by every Afro-American student with serious political aspirations who wants an analysis of the composition and impact of power, black and otherwise.

Cross's central contention is that the ownership of power is imperative before an affinity group can expect access to the full range of opportunities and benefits available in its society. As a force for granting rewards or meting out punishment, the anatomy of power flexes many muscles. His favorites are political and economic, and he holds that the former is a prerequisite of the latter. He observes that blacks in the United States are without their quota of power and are therefore denied many of society's amenities and that the condition will necessarily prevail unless the power inequity is rectified. The greater part of the book is then devoted to techniques for organizing politically, making demands, and using the block vote to swing close elections in ways which reward friends and punish enemies.

In a lengthy argument concerning the absolute necessity of the access to information about employment, education, and other important factors which can only be gotten through the right associations in the right locations, Cross articulates the best case for integration ever.

I have two substantial quarrels with the author. First, his case for the formidable chasm between the power and wealth of the races is too be-

labored and too convincing. I especially disagree with his assessment of the cabinet posts of secretaries of the army, Health and Human Services, and Housing and Urban Development—all of which have at times been held by blacks—as inconsequential in the echelons of power. Praise be to the fates that my parents were not so gloomily informed on the subject. If I were a center city teenager and considered my destiny to be ethnically circumscribed, an encounter with this book might suggest that I exchange my math text for a baseball mitt and withdraw from the sisyphian struggle. Second, his solutions require an unrealistic measure of political sophistication and discipline. A quantum jump from the lowest voter turnout group to one adroitly exercising the ballot based upon electoral college calculus is too "ivory-tower" to realistically expect.

I would neither recommend nor deny access to the book to black teenagers. I hope, however, that those who by chance encounter it will exhibit the same skepticism toward the formidable chasm as Wilbur and Orville Wright exhibited toward the *mathematical proof*, intellectually credible on the eve of Kitty Hawk, that a heavier-than-air body could not fly.

—reviewed by Ethelbert W. Haskins

**Sociology for Whom?** by Alfred McClung Lee (Syracuse, NY: Syracuse University Press, 1986), second edition, 255 pp., \$12.95 paper.

With the authority of a distinguished lifelong career in academic sociology as well as field experience in societal problems, Alfred McClung Lee poses the challenging ques-



tion, "Sociology for whom?" and answers it convincingly. Sociology is not for ivory-tower intellectualism, "scientism," or society's vested interests. Rather, it is essentially for the benefit of society as a whole, for the solution of agonizing social problems, for the emancipation and development of the human being. From this central humanist concern emerges the leading method for sociological research, that of *participant observation*, and onto it social theory must be anchored.

The author knows that this stance amounts to a reversal of the trend maintained by mainstream sociology. He has been a "heretic," whose long-time fight against that trend in mainstream sociology has included the founding of two sociological disciplines dedicated to the centrality of the human being and of social problems.

The second basic question that the author discusses is, "Sociology by whom?" He warns us and demonstrates to us that, unless we study the personal histories of the creators of various sociologies in the context of their cultural milieu, we will not be able to evaluate adequately their products.

I recommend this book to sociologists and other social scientists for healthy soul-searching. In fact, I recommend it to the whole scientific establishment, where concerned thinkers increasingly are asking, "Science for whom?"

—reviewed by Afif I. Tannous

**Gender and the Life Course** edited by Alice S. Rossi (Hawthorne, NY: Aldine Publishing Company, 1985), 389 pp., \$34.95 cloth, \$14.95 paper.

The eighteen edited papers in this volume represent a multidisciplinary assessment of what we know at this time about age and gender over the life span. Historians, economists, psychobiologists, sociologists, and psychologists are all represented.

Humanists believe that human intelligence can be used to solve today's problems and that science can provide

the facts we need. These papers give facts and ideas which could well be used to address some of today's societal problems, such as crime, sex inequity, and the care of children and the elderly. Rossi has collected a wide variety of facts in these essays.

Sex hormones are shown to affect behavior in all species of animals, including humans. Males, on the average, are more active and less nurturing than females. But humans are malleable. The most creative are more likely to be androgynous than sex stereotyped in behavior. For this reason, training of boys should be toward more nurture and concern for others, and of girls toward more math and logical thinking.

Death control—public health and medical advances—keeps more male infants alive since they are the most vulnerable and also keeps extending the sex gap in older age longevity. Over time, these two effects might balance the sex ratio in old age—but at the cost of having an excess of adolescent males. These young men are not well integrated into society and exhibit the highest rates of deviant behavior. The solution is not the army or prisons or terrorist gangs, as at present, but some creative way to put their excess energy and daring to societal use.

Hidden in the statistics on aging is the fact that the problem of the frail and poor elderly is essentially a women's problem. But older women may also "set the future pace for humankind" because of their greater experience with close relationships, with multiple roles, and with the flexibility they have practiced in their own lives.

This book is not for casual reading but is fascinating for those who would like the latest facts to use when developing humanistic policies for our society.

—reviewed by Margaret Feldman

**A Skeptic's Handbook of Parapsychology** edited by Paul Kurtz (Buffalo, NY: Prometheus Books, 1985), 727 pp., \$34.95 cloth, \$16.95 paper.

From ESP to ghosts, from reincarnation to telepathy, magic tricks, and fraud, *A Skeptic's Handbook of Parapsychology* covers myriad topics well and is a useful addition to any library—skeptic's or believer's. Commentaries by analytical nondebunkers and neutrals are included—we get Rogo, Blackmore, Beloff, Dingwall, Hovelmann, Hoebens, Hyman, and Truzzi as well as Randi, Gardner, Alcock, Hansel, and a who's who of harder-core skeptics. Astrology, cult archaeology, and many other issues are more or less ignored, but there are good theoretical and case studies (for example, the Soal fraud). I did miss finding any clear political and cultural analysis of parapsychology and the need to believe beyond individualistic and group psychology.

A cumulative bibliography would have saved many pages and been useful alone, but the thirty articles are useful independently. Articles range from narrow to definitive. A true skeptic's encyclopedia rather than anthology would still be nice. Meanwhile, this is an intelligent, fair, readable, pro-and-con survey of major paranormal claims.

—reviewed by John R. Cole

**Christian Science** by Mark Twain (Buffalo, NY: Prometheus Books, 1986), 196 pp., \$21.95 cloth.

*Christian Science* is the first printing in seventy-five years of Mark Twain's diatribe against Mary Baker Eddy. Even the most militant "Twainiacs" will likely wish that it had remained obscure. Twain unleashes the full power of his vaunted skeptical prose on the hapless prophetess of Christian Science, but the effort seems wasted at this distance. Substituting the claymore of invective for the rapier of satire, Twain excoriates Eddy for numerous inconsistencies, non sequiturs, indoctrination of worshippers, and probable ecclesiastical corruption.

What a pity that such an influential writer as Twain did not under-



# WHAT PEOPLE ARE SAYING ABOUT AMERICAN DEMOCRACY AND THE VATICAN

## Population Growth and National Security

BY STEPHEN D. MUMFORD

Stephen Mumford dares to expose a largely secret but powerful opposition to controlling the runaway growth of the human population and establishing a sustainable society by the Vatican. If only half his claims are true, they still describe a grave threat to the future of humankind and the democratic institutions of the United States alike. —Anne and Paul Ehrlich, *Zero Population Growth*

... sharp insights, unyielding courage, and philosophic sweep that is essential reading for everyone concerned with the assault of the Catholic hierarchy and right-wing fundamentalists on America's long tradition of church-state separation.—Larry Lader, president, *Abortion Rights Mobilization, Inc.*

... scholarly, carefully researched study. ... It should be read by leaders of public opinion.—Frances Ferguson, *birth control pioneer*

... clearly shows that Paul Blanshard's warning of thirty-five years ago that the Vatican had a plan to impose its antidemocratic policies on America was justified ... the effort has accelerated alarmingly. ... Vatican policies, backed by Rome and the New Right, are increasing the overpopulation and insecurity of the world. Rome opposes planned parenthood, sex education, abortion, limitation of immigration, and to what end? To the increase of the Vatican's political and financial power. It is a power struggle, not a religious struggle.—Edwin H. Wilson, executive director emeritus, *American Humanist Association*

The bravery of the Humanist Press in publishing this story is only exceeded by the excellent and persuasive writing. ... It is education at its best in its horrifying, gripping truth.—Elaine Stansfield, *Zero Population Growth*

... extremely interesting and indeed eye-opening. ... well worth reading and digesting. Its message is deeply disturbing.—M. Rupert Cutler, executive director, *The Environmental Fund*

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stand that the historical importance of a religion is not that it is true but that people believe it to be so and that no amount of positivistic evidence will convince believers that it is not. Scholars interested in the debate between faith and reason—crucial for humanists as never before—would be better served by seeking its modern origins in the writings of Aquinas and Occam. The aged Twain's bitter vehemence is best left out of print.

—reviewed by C. Stuart McGehee

**This Ground Is Holy** by Ignatius Bau (Mahweh, NJ: Paulist Press, 1985), 288 pp., \$9.95 paper.

Bau makes a significant contribution to understanding the growth of the sanctuary movement in the United States. Particularly helpful is his discussion of the development of the United States law concerning refugees and the existing ambiguities over that term. Equally helpful is his analysis of the legal background for the sanctuary movement and his emphasis that this is a new concept, quite different from the medieval and early modern concept of sanctuary. To emphasize this, he summarizes several of the recent cases in which the federal government has prosecuted sanctuary workers. Though Bau clearly feels that the sanctuary movement is morally right, his discussion of the background and issues is relatively unbiased and to the point. The one criticism to be made is that there is no index, although there is an extensive bibliography.

—reviewed by Vern L. Bullough

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## CHURCH AND STATE

Edd Doerr

### Bashing Public Education

On April 24, 1986, in Room 106 of the Dirksen Senate Office Building, the Reagan administration sponsored an all-day *Schlagfest*, an orgy of ill-tempered attacks on American public education and the Supreme Court's rulings on church-state separation.

As many of the speakers suggested none too subtly, our public schools are as much enemies of God and country as a planeload of Libyan terrorists. But you won't have read or heard anything in the media about the "Symposium on Content, Character, and Choice in Schooling" because they did not bother to cover it.

Education Secretary William Bennett, a parochial-school-educated advocate of government-regimented prayer in public schools and tax support for sectarian private schools, opened the symposium with the assertion that our public schools are adequately funded, despite expert opinion to the contrary and the fact that the Reagan administration has made significant cuts in school funding. Bennett continued with a plug for the administration's tuition tax credit and voucher plans for federal aid to parochial schools.

In one of the very few opportunities for questions from the floor, I asked Bennett if, although he expressed opposition to tax support for schools which practice racial discrimination, he would approve of tax support for religious, ideological, and other forms of discrimination common in nonpublic school admissions and hiring. Yes, he said, because to compel tax-supported private schools to play by the same rules as public schools would be to "unfairly" force them to change their character. So much for equal application of law. Or, as Orwell

put it so well, "All pigs are equal, but some pigs are more equal than others."

Ideologue Russell Kirk followed with his usual pitch for including literary classics, which he did not name, in the school curricula and with a slam at the Supreme Court's school prayer rulings.

Psychologist Paul Vitz, who analyzed public school textbooks for religious content for the Reagan administration, reported his finding that history and literature textbooks contain very few references to religion but failed to shed any light on why this might be so. Vitz leaped from this "finding" to the conclusion that the United States should provide tax support for sectarian private schools. He denounced what he called the "coercive" public school "monopoly."

In the conference's only other brief period for questions, I asked Vitz the following: did he question textbook publishers, authors, and editors as to why they rarely mention religion? Wasn't he aware that there are many courses, minicourses, course units, and textbooks about religion in use in many public schools, often obviating the need to deal with religion in other texts? Wasn't he aware that, despite the availability of numerous textbooks about religion, there is really very little public demand for constitutional, objective, neutral teaching about religion? Wasn't he aware of the great difficulties involved in deciding what, at which grade levels, and how to teach about religion objectively and neutrally, and that these difficulties—such as how to deal with unpleasant facts about religion—probably accounted for the reluctance of publishers to put much about religion into regular course textbooks? Didn't he know that most states have not confronted the thorny problems of training and certifying

teachers to deal properly with religion? And, finally, didn't he know that the best example of the consequences of providing tax support to sectarian schools is Northern Ireland?

Vitz evaded my questions with an emotional outburst.

Richard A. Baer, Jr., a professor of environmental ethics at Cornell linked with the misnamed propaganda group, Catholic League for Religious and Civil Rights, followed Vitz with a slashing, hellfire-and-damnation assault on public education. Echoing several voucher-parochialist theoreticians, Baer insisted that the word *public* be attached to any "government" or private school which "meets the state's minimum compelling interest in education." He strongly implied that sectarian private schools should receive full public funding, though they would be able to practice religious, ideological, and other forms of discrimination—except racial and national origin—in admissions and hiring. He made the manifestly absurd assertions that parental and local control of schools is a "myth," that there is no free market of ideas in "government schools," that no curriculum can be neutral with regard to religion, and that a semi-established "secular humanism" had replaced traditional religious values in public schools.

Baer was followed by William B. Ball, a Pennsylvania attorney whose defenses of parochialism have been repeatedly rejected by the Supreme Court. Ball claimed that the administration's voucher parochialist plan is constitutional and went on to add that nonpublic school parents should be exempted from taxes used to pay for public schools. He neglected to say how his idea would help poor people attend parochial schools if they paid little or no taxes on which to get rebates.



Thomas R. Ascik, who heads something called the Clearinghouse on Educational Choice, continued the attack on public schools. He decried the Supreme Court's "unconstitutional fabrication" of the principle of separation of church and state in 1947, slashed at Horace Mann and John Dewey, denounced the idea that public education is the "glue" holding society together, condemned public education as hopelessly bad, and denied that local school boards really control local schools.

Robert L. Woodson, the conference's only black and president of the National Center for Neighborhood Enterprise, endorsed the voucher plan, pointedly avoiding addressing the reasons why many urban black children are on the short end of the educational stick.

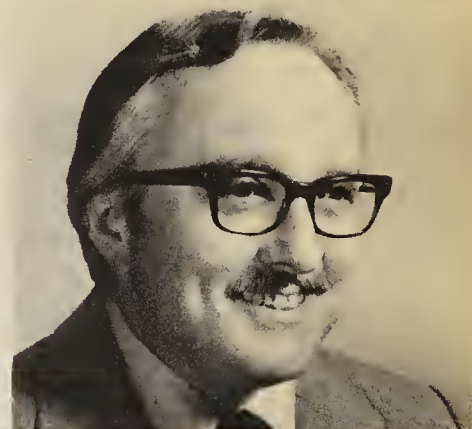
The conference's lone defender of public education, Michael Casserly,

research director of the Council of Great City Schools, was swamped by the propaganda tidal wave.

This symposium shows the strength of fanatical commitment in the Reagan administration and its Education Department to tearing down American public education and the constitutional principle of church-state separation. Instead of working to improve the public schools which serve nine out of ten American children, the Reagan-Bennett Education Department is fiercely dedicated to undermining our great educational enterprise, which is democratically run by local parents and taxpayers. The present Education Department is run by and for narrow, sectarian, reactionary groups. These groups want to unite religion and government, fragment education into a multiplicity of feudal enclaves, and replace democratic, pluralistic education with sectarian

and ideological indoctrination.

Now more than ever Americans of all persuasions, parties, and walks of life need to rally around our public schools, besieged as they are by their own federal government.



Edd Doerr is vice-president and chairperson of the board of directors of the American Humanist Association and is executive director of Americans for Religious Liberty.

**Now back by popular demand!**

## Evolution vs. Creationism The Schools as Battleground

After being unavailable for nearly a decade, the articles on the creation-evolution controversy published in the January/February 1977 issue of *The Humanist* are back in print! These articles include the AHA's ground-breaking "Statement Affirming Evolution as a Principle of Science," which was sent to the major school districts in the country, and extensive articles on creationism and evolution by Preston Cloud, William V. Mayer, and Bette Chambers.

As an extra bonus, follow-up articles that appeared in the November/December 1977 issue of *The Humanist* are also included. These consist of an article by leading creationist

Duane Gish and responses from Cloud and Mayer. All of this is combined between the covers of one thirty-page booklet—a compilation of the precedent-setting articles on the creation-evolution controversy published by the American Humanist Association in 1977.

It is hard to believe that this material is as current today as it was when published. In fact, with the U.S. Supreme Court now about to hear the Louisiana creationism case, these articles have increased in significance. *The Humanist* was one of the first publications in America to report on the growing threat of creationism, and the AHA was one of the first

organizations to take a stand. The press took notice of the fact that leading scientists from all over the United States signed the "Statement Affirming Evolution as a Principle of Science." Creationists were taken by surprise and scrambled to respond. From that point on, creationist designs on the public schools became public knowledge and the battle began to heat up. The controversy still rages today.

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## FILM REVIEW

### Reality's Face

In close-up . . . a face can speak with the subtlest shades of meaning . . . the solitary human soul can find a tongue more candid and uninhibited than in any spoken soliloquy. . . . In the isolated close-up of the film we can see to the bottom of a soul. . . .

—BELA BALAZS

The first things to be said about *The Trip to Bountiful* are that the film is a rich celebration of the art of Geraldine Page and that it bears eloquent testimony to the power of the close-up as a technique for the revelation of character. Ms. Page offers us a multi-layered and exquisitely subtle performance evolved out of a lifetime's refinement of her remarkable talents. More than any actress I know, she has the power to convey a sense of the poignancy and beauty of old age that Rembrandt explored so profoundly in his later canvases.

In *The Trip to Bountiful*, Ms. Page plays Mrs. Watts, an elderly widow with a heart condition who rooms in 1940s Houston with her weak, insensitive son, Ludie (John Heard), and his shrewish, self-indulgent wife, Jessie-Mae (Carlin Glynn). Exploited for her social security check and treated as an unpaid domestic and as a virtual captive, she dreams of returning to Bountiful, her childhood home on a plantation near the Gulf of Mexico. At last, intolerably humiliated by Jessie-Mae—with the connivance of Ludie—she secretly packs a suitcase and slips away to realize her dream.

On the bus she is befriended by Thelma (Rebecca De Mornay), a war bride returning home to her parents while her husband is serving overseas. Thelma displays all the feeling that

Jessie-Mae conspicuously lacks. She also contrasts disturbingly with Mrs. Watts. Young and pretty, Thelma is returning to adoring parents and is deeply in love with her husband. By contrast, Mrs. Watts reveals that she had never been in love with her husband and that her father, "a peculiar man," had prevented her from marrying the only person she had ever cared for.

Stranded twelve miles from her destination, Mrs. Watts arouses the sympathy of a local sheriff who had been asked to apprehend her; he winds up driving her to Bountiful where she discovers the reality behind her dream. The Bountiful of her memories and her fantasies has become an abandoned ruin on a "worn-out land" symbolizing her life. Everyone she had known there has died or departed. But by the time Ludie and Jessie-Mae arrive to collect her, she has managed to come to terms with herself.

Life, she realizes, can be "bountiful" to those who love and are loved, but barren—like Bountiful's land or her childless daughter-in-law—to the unloving and unloved. Having glimpsed, through Thelma, the love and happiness she might have known, she turns her back, resignedly, on the vestiges of her unfulfilled life. After affirming to Ludie her faith that life's cycles will continue, thereby renewing the "worn-out land," she defiantly informs Jessie-Mae, "I've had my trip—that's more than enough to keep me happy for the rest of my life." Infuriated, Jessie-Mae tries to intimidate her, but Ludie, his conscience aroused at last, extracts from his wife a promise of more respectful behavior before they climb into the car for the drive back to Houston.

Directed by Peter Masterson, *The*

*Trip to Bountiful* is based upon a play by Horton Foote (*To Kill a Mockingbird*; *Tender Mercies*, and so forth), but it develops less obviously as a dramatic statement than as an unraveling of the psyche of its central character. I left the theater knowing and understanding Mrs. Watts better than I do most of the people in my life. The major reason for this, as I have already noted, is that the performance is *multi-layered*; that is to say, Geraldine Page repeatedly suggests the disillusioned woman behind the fading widow, the romantic girl behind the disillusioned woman, and the shy but playful child behind the romantic girl. And enriching her performance is a series of searching close-ups that underscore the character's grace and pathos. A lifetime's experience is written in her face and gestures. What Balazs calls *the language of the soul* is expressed in her girlish coyness, her tired, wan-but-winsome smiles, and her repeated, feathery movements of the hand as she pats her hair (the reflex of a once-attractive woman), lightly brushes her cheek, and caresses her neck (a visible reminder of the tenderness her life has lacked).

I could go on at length elaborating on how Geraldine Page demonstrates that there really is an art to finding the mind's construction in the face. However, my unqualified admiration of her performance must not overshadow the fact that the film has its flaws. Two sequences, the opening of the film and an episode at the bus station, appear overly theatrical; Mr. Foote's play has not been "opened up" sufficiently to allow for a cinematic *mise en scène*. Jessie-Mae's denunciation of her mother-in-law to Thelma—a total stranger—looks contrived. There are also problems of characterization: Jessie-Mae is too strident to be be-

Harry M. Geduld



lieved, Ludie's eleventh-hour discovery of a conscience is insufficiently accounted for, and Thelma sometimes seems more enigmatic than sympathetic.

Yet Geraldine Page more than carries the film, revealing through her inimitable depiction of Mrs. Watts' soul-searching pilgrimage what is, I think, the grand humanistic theme of all of Mr. Foote's writings: an innate dignity and a need for respect are basic to

all human beings.

*Harry Geduld, professor of comparative literature at Indiana University in Bloomington, has published fifteen books on various aspects of literature, criticism, and film. In addition to his long tenure as film columnist for The Humanist, he has also published several hundred reviews and articles on books, plays, and films in a variety of other journals and magazines.*



## WORTH NOTING

### Time Will Tell

"I am a Roman Catholic woman by choice," declared Mary Ann Sorrentino, executive director of Planned Parenthood of Rhode Island, who has been excommunicated from the Church for her work supporting abortion. Isn't it possible that by the twenty-second century she will be canonized?

### Good Luck Down There

For several years, the water level of the Great Salt Lake has been rising, until now it poses a serious threat to major highways and the Union Pacific and Southern Pacific railroad tracks. Mormon leaders called upon Utahans to fast and pray this past May 4 for a respite. Someone must not have been listening, for it rained all day and the lake rose an additional inch.

### United Nations University

When the United Nations Educational, Scientific, and Cultural Organization (UNESCO) was founded in 1946,

Director General Julian Huxley envisioned humanism as its overarching philosophy. During the 1960s, the World Academy of Art and Science started a campusless world university with department affiliations in many countries. Funding difficulties arose and UNESCO came forward in advancing the concept of a transnational effort to unify the world's intellectual resources.

After a recent visit to the United Nations University headquartered in Tokyo, humanist author Pearl Ross pointed out:

The United Nations University has been established as a major tool in the furtherance of the principles and purposes of the U.N. charter. It is a networking university, tying together and initiating projects in universities and research centers around the globe to fulfill its function as an interdisciplinary approach to global problems. More than five hundred U.N. fellowships have been awarded and most of these trainees have already left Japan to apply their knowledge and insights to the needs of their own

countries, tying their work in with a global approach. Japan has contributed \$100 million to this institution and other nations, lesser amounts. The United States is conspicuous by its failure to make any contribution.

Individuals who would like to rectify this can contact Pearl Ross at 735 Filmore Street, Monterey, CA 93940.

### Good Luck, Graduates

The North American Committee for Humanism (NACH) is holding its fifth annual conference August 22-24, 1986, in New York City. The theme for this year is "Science and Humanism," and the keynote address will be delivered by Earl Ubell. Other speakers include Ralph Alpher, Lawrence Levine, Mark Weiss, Khoren Arisian, Harvey Sarles, and Robert Tapp. Roger Greeley will present a "Multimedia Tribute to Science." On Saturday evening, the first graduation of the Humanist Institute will take place, at which time Davis Joyce and Donn Marcussen will graduate.



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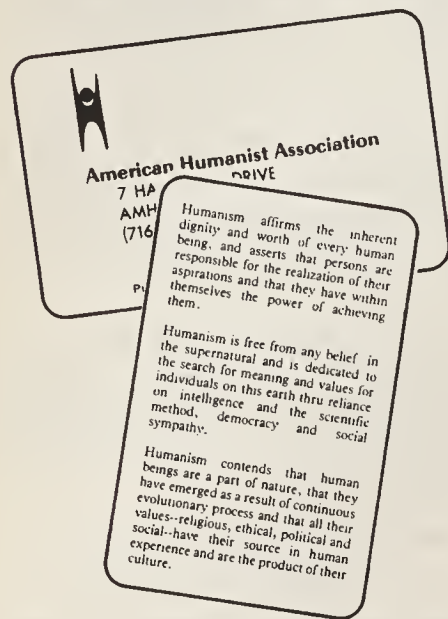
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## SCIENTIFIC ILLITERACY

CONTINUED FROM PAGE 17

by this. The eventual triumph of knowledge over the forces of ignorance and bigotry is not enough. The growth of our body of scientific knowledge should not be retarded. When there is no good reason why advanced societies should offer a second-rate education in science, then action should be taken to remedy the situation. John Dewey said it well: "Nothing but the best, the richest and fullest experience possible, is good enough for man." Let's not cut ourselves, or our world, short. We can insist upon excellence—and, by insisting, be deserving of the same.

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# READERS FORUM

CONTINUED FROM PAGE 4

Snyder on belief in astrology pointed out that testers tend to ask questions of the subject that confirm the astrological predictions, even when the tester is skeptical of astrology, so that the results generally confirm the validity of astrology ("Self-fulfilling Prophecy: The Psychology of Belief in Astrology," May/June 1986).

This is an interesting psychological phenomenon with which I have no quarrel. But I take exception to their assumption that the only basis for belief or disbelief in astrology is the outcome of tests for the validity of its predictions. The authors say that "many skeptics dismiss astrology out of hand without taking the time to conduct any tests." At another place they say: "If the only thing that distinguishes skeptics from believers is that skeptics have never bothered to test astrology, then every skeptic is a potential believer if he or she can be induced to perform a test."

I feel there are other sound reasons for not believing in astrology besides its failure to predict. Let me put it this way: why *should* we believe that the positions of a group of stars and planets arbitrarily selected by ancients determine our personalities and predict our futures—especially when their locations are constantly changing? Why should we believe this any more than that the lines on our hands determine our fate, that the random settling of tea leaves in a cup predicts future happenings, that the arrangement of entrails drawn from a dead chicken gives us wise counsel for future actions?

Are we to accept palmistry, tea-leaf readings, and chicken-gut divination as possibly valid means of prediction until we have taken the time to conduct scientific tests to prove their worthlessness? There are surely more profitable ways we can spend our time opposing superstition and promoting scientific thinking. . . .

I suspect that most people who believe in astrology do so because they are overwhelmed by a strong—perhaps instinctive—will to believe, not be-

cause they are overwhelmed by confirming evidence. Skeptics who see only a waste of time in testing obvious superstitions can even invoke Jeremiah in the Bible to support their stand: "Be not dismayed at the signs of heaven . . . Be not afraid of them; for they cannot do evil, neither also is it in them to do good."

C. W. Dalton  
Lakeside, CA

Peter Glick and Mark Snyder's article provides an important account of a deep-seated irrational tendency in human reasoning. They describe how people tend to test hypotheses using a *verification strategy*—that is, by seeking information that would support the hypothesis. Such a strategy does not really test the hypothesis since it does not look for—and is thus unlikely to find—disconfirming evidence. This may account for the failure to reject not only astrology but a variety of myths, superstitions, and stereotypes.

The situation may not be quite as bleak as the authors suggest, however. Research shows that under favorable circumstances people do apply a *falsification strategy*—that is, they put hypotheses to a genuine test by trying to falsify them. . . . Moreover, there is evidence that, between grades seven and college, students increasingly understand the limits of the verification strategy and become more likely to use a falsification strategy. . . .

Research does, nevertheless, strongly support Glick and Snyder's conclusion that the inadequate verification strategy is all too common in intelligent adults—even though they are capable of better reasoning. Educators aware of this research are in a better position to facilitate the development of more mature hypothesis testing. And all of us should remind ourselves to actively seek disconfirming evidence—especially when we are testing ideas to which we are emotionally committed. Only thus can we put our own myths and stereotypes to a genuine test.

David Moshman  
Lincoln, NE

## A Semantic Conundrum

Robert Bowman's reply (May/June 1986) to John Baker's article ("Fundamentalism as 'Anti-intellectualism,'" March/April 1986) in which Bowman describes himself as a "fundamentalist intellectual" presents this reader with a semantic conundrum. One is reminded of George Bernard Shaw's quip, "A Catholic university? . . . that's a contradiction in terms." What, then, is Bowman's definition of a fundamentalist if it is not a believer in the literal truth of the Bible? And what, pray, is an intellectual if he is not by definition—whatever else he may be—a "believer" in the critical use of the human mind and its application to *all* spheres of human endeavor?

Bowman states that, "if one thing in the Bible is false, then it is not God's word. . . ." Who makes this judgment? Depending upon the degree of acceptance of biblical truth, are we to speak of 100 percent, 60 percent, or 30 percent fundamentalists? . . .

As to the atheistic humanist's examination of the Bible, it is very unlikely that the "truth" or "error" contained in it would be of any particular interest to him or her were it not to refute the extravagant scientific, social, and political claims based upon the fundamentalists' biblical interpretations. In any event, anti-intellectualism is not a matter of being unable to change one's views. It is the unwillingness or inability to investigate how one arrived at holding certain views to begin with.

Henry Darcy  
Austin, TX

Robert Bowman's recent letter made some legitimate criticisms of John Baker's previous article, "Fundamentalism as Anti-intellectualism," but in each case Baker's general points remained valid.

Bowman states that Baker is correct to criticize "young-Earth" creationists "for their refusal to face facts" and then chastizes him for failing to distinguish "progressive" creationists from that more conservative variety. The fact is, all varieties of cre-



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ationists are legitimately criticized for their refusal to face facts and for their refusal to refrain from slippery methods of biblical interpretation (with which the biblical message is continually updated in accordance with popular acceptance of scientific theories) in their constant efforts to keep the Bible inerrant (and thus protect their belief in the Bible as God's word).

And where is the progressive nature of "progressive creationism"? Its adherents do, as Bowman stated, accept geological and geophysical data concerning Earth's nonorganic history, but at the same time *they deny those same data when it comes to the history of living organisms*. They butcher the Bible (in order to make it fit an ancient Earth), and they butcher science (in order to deny the evolution of humankind) at the same time. Hence, they are not biblical, not scientific, and definitely not progressive. . . .

There is no need to misrepresent fundamentalism. It is easy enough to demonstrate, without resorting to extremities of description or to paranoia, that fundamentalism is an intellectual, moral, and spiritual failure.

Steve Heiden  
Houghton Lake, MI

## Catholic Moral Standing

Frank W. Goheen is certainly right when he claims that the opposition to birth control by the Roman Catholic Church "will more and more undermine its moral standing" ("Papal Journeys," May/June 1986). But Goheen's article fails to tell us that the political position of the Church, aside from this opposition to birth control, does have "moral standing" in the humanist sense. During the past two decades, the Catholic Church has turned away from its traditional political position to support political democracy and economic equality. Its opposition to birth control is not only wrong in the eyes of most people—including Catholics—but is also an anachronism in the context of the Church's support of what can be called a social-democratic political program.

As the recent document, "Chris-

tian Freedom and Liberation," makes clear, the Church is on the side of the poor in their struggle against oppression, economic as well as political. . . . The politics of the Roman Catholic Church (aside from its position on birth control) is very similar to the politics of socialist, social-democratic, and democratic parties in Western Europe, as well as in this hemisphere.

. . . To the extent that humanists engage in political action on behalf of democratic and social-democratic values, we find ourselves allied with the Catholic Church, not with the Marxists. That is why the Catholic position on birth control does indeed "undermine its moral standing." Humanists should oppose this position, of course; but we should welcome the major thrust of the Church toward a more democratic society.

Lawrence W. Hyman  
Ridgewood, NJ

## Is the War Over?

Although Norman and Lucia Hall's "Is the War Between Science and Religion Over?" (May/June 1986) was timely owing to current fundamentalist antiscience bally-hoo, it could have been written some thirty years before.

Eisenhower was then president and Richard Nixon (then "a man of virtue") was his vice-president. It was an era of widespread church-building and "religiosity"—an "Age of Righteousness," as one of my associates ironically described it.

The popular press of the time made the most of the trend. Frequent articles—all wasted ink and paper—trumpeted the "fact" that the ancient struggle between science and religion had ended. While such propaganda might have swayed the Mary Hartmans of America, I was neither taken in nor impressed. Instead, I reminded myself that, from the Galileo affair to the present, the struggle had expressed itself only in outer-fringe skirmishes and that the final and decisive battle was yet in the future.

F. Mark Davis  
Chico, CA



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The three subthemes are self-respect, solidarity, and survival.

The conference begins at noon, Sunday, August 3, and concludes at 4:30 PM  
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Featured Sunday, August 3, is the Grand Show, which will highlight some of  
Norway's humanist writers, composers, and artists as well as provide  
samples of Norwegian folk music. Then on Monday, the focus is upon self-  
respect and self-esteem, with programs being led by **Marilyn French** and  
**Matthew les Spetter**. On Tuesday, the focus changes to solidarity, or the  
ethics of cooperation. Program leaders will be **Johan Galtung** and **Lily  
Boeykens**. On Wednesday, the topic is survival, particularly as it relates to  
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